#### ENVIRONMENTAL CONSULTING & MANAGEMENT

#### **ROUX ASSOCIATES INC**



25 CORPORATE DRIVE SUITE 230

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February 25, 2003

Mr. D. Michael Light Industri-Plex Site Remedial Trust c/o Solutia, Inc. 575 Maryville Centre Drive St. Louis, Missouri 63141

Re: Final GSIP Scope of Work Source Area Investigation Industri-Plex Site Woburn, Massachusetts

Dear Mr. Light:

This letter report has been prepared by Roux Associates, Inc. (Roux Associates), on behalf of the Industri-Plex Site Remedial Trust (ISRT), to present the results of the Source Area Investigation activities recently conducted at the Industri-Plex Superfund Site in Woburn, Massachusetts (Site). In accordance with the U.S. Environmental Protection Agency (USEPA)-approved Source Area Investigation Work Plan, dated September 15, 1999 and amended May 25, 2000, soil and groundwater sampling was conducted in two suspected source areas at the Site to further evaluate the potential for residual sources of benzene and/or toluene to be present in these areas. The study areas, shown in Figure 1, include:

- the Vining (former C. Bain) Property Study Area, comprising the Vining and Graphique de France properties on Atlantic Avenue and the rear of the Pacer property on Commerce Way; and
- the West Hide Pile Study Area, comprising the northeastern portion of the West Hide Pile.

The soil and groundwater sampling activities represent Tasks 3 and 4 of the Source Area Investigation Work Plan, and supplement the soil gas and geophysical surveys (Tasks 1 and 2) previously conducted at the Site. The result of the soil gas and geophysical surveys were reported in interim letter reports dated October 31, 2001 and May 24, 2002, which were previously submitted to the USEPA. Together, Tasks 1 through 4 address the work elements outlined in Section 1.1 of the Final Groundwater/Surface Water Investigation Plan (GSIP) Statement of Work (SOW) issued by the USEPA on August 25, 1998.

Superfund Records Center SITE: Indut. PK. 022

BKF 1K: \_\_3.7

OTHER: 42724

### Scope of Work

In accordance with the Source Area Investigation Work Plan, a total of 19 locations were sampled in the two study areas. Seventeen locations were sampled in the Vining Property Study Area, and two locations were sampled in the West Hide Pile Study Area. This is a slight modification of the scope of work described in the Source Area Investigation Work Plan, and was agreed upon during a November 12, 2002 conference call between the USEPA and the ISRT. During this conference call, it was also decided, in order to verify previous GSIP findings, that four of the Vining Property sampling locations would be located in the general vicinity of Final GSIP SOW groundwater sampling point B5-01, and that the two West Hide Pile locations would correspond to the former locations of GSIP Phase 1 and Phase 2 wells OW-31 and WP-3. The sampling approach described below was also agreed upon during the November 12, 2002 conference call.

### Vining Property Study Area

Soil borings were initially advanced down to the water table using a Geoprobe<sup>™</sup> operated by Geosearch, Inc (Geosearch), of Sterling, Massachusetts, under the direction of Roux Associates. Soil samples were collected continuously using dedicated 2-inch-diameter acetate liners (5 feet in length). The recovered soil cores were separated into two 2.5-foot sections, each of which was screened with a photo-ionization detector (PID) and logged. A soil sample was collected from each 2.5-foot interval using a pre-cleaned syringe, which was temporarily capped to prevent volatilization. The soil sample exhibiting the highest PID reading or, if no positive PID readings were indicated, the sample collected just above the water table was then containerized immersed in methanol, and submitted to Lancaster Laboratories (Lancaster Labs) of Lancaster, Pennsylvania for analysis of benzene and toluene by USEPA Method 8021B. Soil boring forms showing the lithology, PID readings, and sample interval for each location are provided in Attachment 1.

Once groundwater was encountered, the boring was advanced to a depth of 15 feet (typically 2 to 5 feet below the water table). A 1-inch-diameter, 5-foot-long well screen and an appropriate length of riser were then installed into the borehole, and a groundwater sample ("shallow") was collected using USEPA Region 1 low-flow sampling procedures. Specifically groundwater was extracted from the temporary wells using a low-flow peristaltic pump, and run through a flow-through cell in which measurements of field parameters including temperature, conductivity, dissolved oxygen, pH, and oxidation-reduction potential (ORP), were made. Turbidity was also measured using a separate turbidimeter. Groundwater was pumped until these parameters had stabilized, as defined in the USEPA Region 1 low-flow sampling Standard Operating Procedure (GW 0001). Once the parameters were stable, a groundwater sample was collected and submitted to Lancaster Labs for analysis of benzene and toluene by USEPA Method 8021B. Groundwater samples were not preserved, in accordance with the Source Area Investigation Work Plan, due to previous problems with effervescence. Groundwater sampling forms are provided in Attachment 2.

After the shallow groundwater sampling was completed, the temporary well was removed from the boring and the boring was advanced through the saturated zone (using either a dual-tube approach or a discrete sampler) until refusal was encountered (assumed to be the bedrock surface). Soil samples were again collected continuously, screened with a PID, and logged, this time in 5-foot intervals. Once refusal was encountered, a new 1-inch-diameter, 5-foot length of well screen was installed into the borehole and the Geoprobe<sup>TM</sup> casing was retracted 5 feet. A second ("deep") groundwater sample was then collected using low-flow sampling procedures, and submitted to Lancaster Labs for analysis of benzene and toluene by USEPA Method 8021B.

### West Hide Pile Study Area

The sampling approach for the two sampling locations at the West Hide Pile Study Area (RX-18 and RX-19) was identical to that used at the Vining Property Study Area, with the following exceptions:

- the shallow groundwater samples were collected at a depth of 13 feet (rather than 15 feet) due to logistical considerations associated with the Geoprobe rig;
- in addition to the "shallow" and "deep" samples, an intermediate-depth groundwater sample was collected at the approximate mid-point of the saturated zone; and
- a second, saturated soil sample was collected at location RX-18, due to the elevated PID readings observed just below the water table.

#### Results

Tabulated results of the soil and groundwater analyses, including results for the quality control (QC) samples collected by Roux Associates, are included as Tables 1 and 2, respectively. Benzene concentrations detected in soil and groundwater are depicted in Figure 2, while toluene concentrations are depicted in Figure 3. In these figures, three dots are drawn next to each sampling point, representing the detected concentration for soil, shallow groundwater, and deep groundwater, respectively. At the two locations within the West Hide Pile, a fourth dot was drawn representing the intermediate groundwater sample. Each dot was assigned a color to indicate the range of the benzene/toluene concentrations detected at the corresponding sampling point. The concentration ranges represented by the various colors for soil and groundwater are shown in the figures. Please note that a dot was not shown for the second soil sample collected at West Hide Pile sampling location RX-18, since the sample was collected below the water table. It should also be noted that the unsaturated soil samples collected at the two West Hide Pile sampling locations were obtained from soils situated underneath the geotextile cap installed over the West Hide Pile in the 1990s.

Mr. D. Michael Light February 25, 2003 Page 4

In accordance with the Source Area Investigation Work Plan, the soil and groundwater data were subject to validation in accordance with USEPA guidelines. Data validation was performed by O'Brien & Gere Engineers, Inc. (OBG), of Syracuse, New York, in part based on the QC sampling conducted by Roux Associates. A memorandum summarizing OBG's validation exercise is provided as Attachment 3.

Respectfully Submitted,

ROUX ASSOCIATES INC.

Christopher J. Milone Project Hydrogeologist

Lawrence McTiernan

Principal Hydrogeologist/Project Manager

Attachments

.

# Table 1 - Soil Analytical Data Source Area Investigation Industri-Plex Site

# Woburn, Massachusetts December 2002

Sample Location	Sample Interval	Date Collected	PID Reading (ppmv)	Benzene (μg/kg)	Toluene (μg/kg)
RX-1	10-12.5'	12/5/2002	0.0	1.3J	<1.3
RX-2	2.5-5.0'	12/2/2002	0.0	25	3.3J
RX-3	0-2.5'	12/4/2002	13.0	30	220
RX-4	12.5-15'	12/3/2002	34.5	130	3.8
RX-5	7.5-10'	12/5/2002	8.1	7.6	<1.3
RX-6	12.5-15'	12/3/2002	293	500	<1.8
RX-7	2.5-5.0'	12/12/2002	19.7	4.7	<1.4
RX-8	7.5-10'	12/6/2002	≥2,000	110,000	40,000
RX-9	7.5-10'	12/4/2002	>2 000	95,000	96,000
RX-9 DUP	7.3-10	[2/4/2002]	≥2,000	87,000	100,000
RX-10	0-2.51	12/12/2002	19.2	23	36
RX-11	7.5-10'	12/6/2002	1,909	24,000	9,300
RX-12	7.5-10'	12/9/2002	0.0	<1.2	<1.2
RX-13	5.0-7.5'	12/9/2002	12.6	6.7 J	27
RX-14	0-2.5'	12/10/2002	0.8	<1.5	1.8J
RX-15	7.5-10'	12/11/2002	10.0	3.7	<1.4
RX-16	7,5-10'	12/11/2002	70.1	1,500	290
RX-16 DUP	7.3-10	12/11/2002	70.1	1,300	260J
RX-17	5.0-7.5'	12/10/2002	0.0	14J	3.7J
RX-18	5.0-7.5'	12/13/2002	201	13J	2.2J
RX-18	10-15'	12/13/2002	≥2,000	210,000	16,000
RX-19	2.5-5.0'	12/13/2002	0.0	12	1.4J

### Notes:

ppmv: parts per million by volume  $(\mu g/Kg)$ : microgram per kilogram

J: Concentration estimated; details provided in data validation memorandum.

Dup: duplicate sample

### Table 2 - Groundwater Analytical Data Source Area Investigation Industri-Plex Site

### Woburn, Massachusetts December 2002

Sample		Sample	Date	Benzene	Toluene
Location	Horizon	Depth	Collected	(μg/l)	$(\mu g/l)$
RX-1	S	15'	12/5/2002	130	0.51J
RX-1	D	30'	12/5/2002	3,800	1,600
RX-2	S	15'	12/2/2002	110	0.91J
RX-2	D	33'	12/2/2002	3,000	850
RX-3	S	15'	12/4/2002	370	5.7
RX-3	D	23'	12/4/2002	1,100	120
RX-4	S	15'	12/3/2002	430	5.4J
RX-4	D	29'	12/3/2002	6,000	1,900
RX-5	S	15'	12/5/2002	790	1.8J
RX-5	D	29'	12/5/2002	13,000	1,800
RX-6	S	15'	12/3/2002	21,000	67
RX-6	D	29'	12/3/2002	14,000	2,500
RX-7	S	15'	12/12/2002	2,500	230
RX-7	D	31'	12/12/2002	4,300	820
RX-7 DUP	D	31'	12/12/2002	4,300	820
RX-8	S	15'	12/6/2002	17,000	95
RX-8	D	31'	12/6/2002	15,000	960
RX-9	S	15'	12/4/2002	210	94
RX-9 DUP	S	15'	12/4/2002	220	100
RX-9	D	33'	12/5/2002	2,600	450
RX-10	S	15'	12/12/2002	12,000	19 <b>J</b>
RX-10	D	25'	12/12/2002	13,000	1,700
RX-11	S	15'	12/6/2002	13,000J	74J
RX-11	D	31'	12/6/2002	400J	66J
RX-12	S	15'	12/9/2002	0.52J	< 0.20
RX-12	D	31'	12/9/2002	0.41J	<0.20
RX-13	S	15'	12/9/2002	1.7	0.25J
RX-13	D	29'	12/9/2002	2.7J	9.4
RX-14	S	15'	12/10/2002	180	< 0.20
RX-14 DUP	S	15'	12/10/2002	180	< 0.20
RX-14	D	29'	12/10/2002	17	0.45J
RX-15	S	15'	12/11/2002	2,900	5.1J
RX-15	D	29'	12/11/2002	1.4	< 0.20
RX-16	S	15'	12/11/2002	2,400	4.0J
RX-16	D	29'	12/11/2002	1,200	<1.0
RX-17	S	15'	12/10/2002	69,000	97J
RX-17	D	33'	12/10/2002	37	4.4
RX-18	<u>S</u>	13'	12/13/2002	3,900	160
RX-18 DUP	S	13'	12/13/2002	4,100	170
RX-18	I	20'	12/19/2002	4,800J	110J
RX-18	D	30'	12/13/2002	170	25
RX-19	S	13'	12/19/2002	3.7J	<0.57J
RX-19	I	22'	12/19/2002	940J	<5.0J
RX-19	D	30'	12/13/2002	51	25

# Notes:

S: shallow sample

I: intermediate sample

D: deep sample

(μg/l): microgram per liter

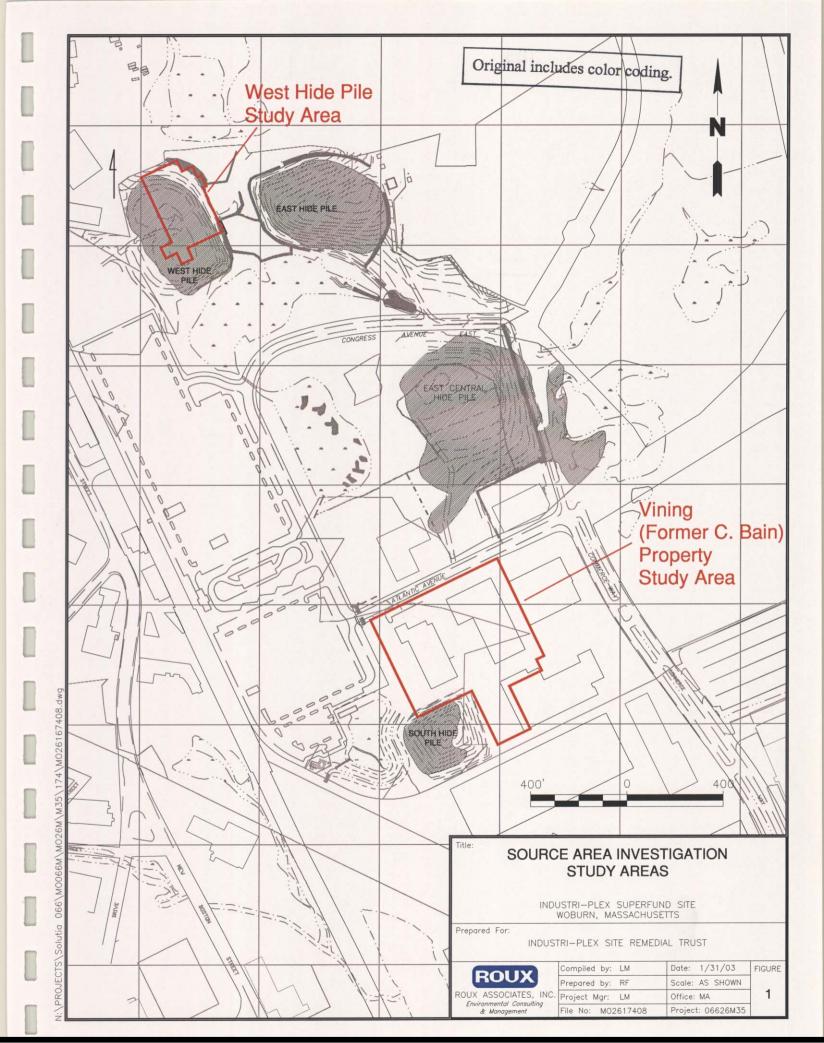
J: Concentration estimated; details provided in data validatio

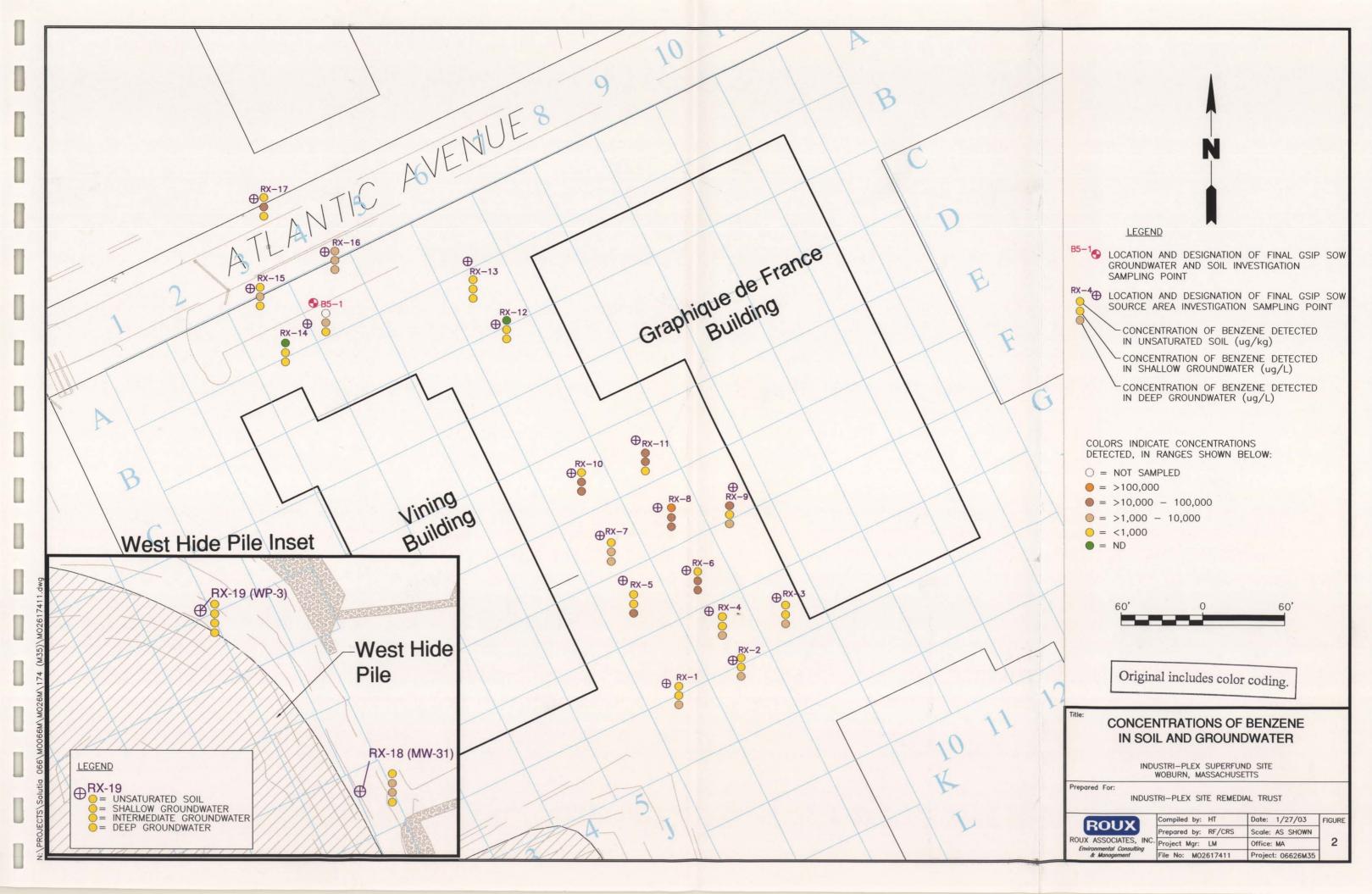
Dup: duplicate sample

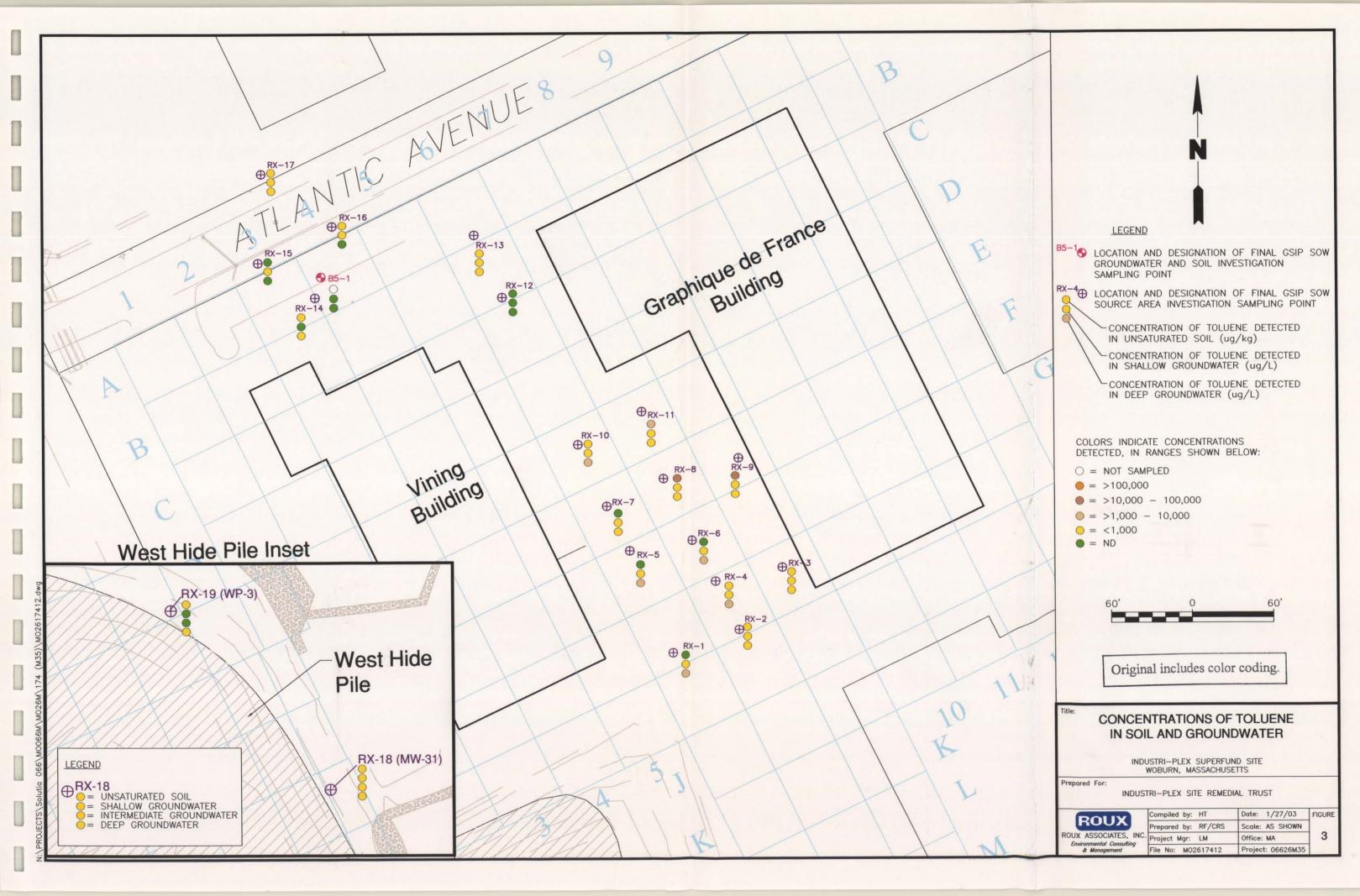
**FIGURES** 

Michigan Company

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Sugar, Section Section 2015

**ATTACHMENTS** 

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# **ATTACHMENT 1**

Soil Boring Forms

ROUX ASSOCIATES, INC.

GeoProbe Soil Investigation Soil Boring Form

Location: Woburn, MA

Field Staff:

Date Sampled:

HAT/LHC 12/5/2002

Depth	Head Space	Descripition	Soil Sample	Water Sample
(feet)	PID (ppm)		Collected *	Collected
		0-2' Light brown fine SAND.		
0-2.5	0.0	2-2.5' Brown fine SAND, some Silt.		
2.5-5.0	0.0	Grey fine SAND.		
5.0-7.5	0.0	Grey fine SAND, trace Silt.		
7.5-10	0.0	Black fine SAND.		
10-12.5	0.0	Black fine SAND, trace Silt; Wet at 11'.	RX-1 (10-12.5')	
12.5-15	0.1	Black fine SAND, trace Silt.		RX-1 (15')
15-20	7.3			
20-25	8.9	Black fine SAND, some Silt.		
<b>25-30</b>	3.4	Black fine SAND, some Silt, trace fine Gravel.		RX-1 (30')

Notes:

<sup>\* =</sup> Saturated portion of interval was not included in sample sent to lab.

ROUX ASSOCIATES, INC.

GeoProbe Soil Investigation

Location: Woburn, MA

Field Staff:

HAT/LHC

**Soil Boring Form** 

Date Sampled:

12/2/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected *	Water Sample Collected
0-2.5	0.0	Brown fine (+) to medium SAND, trace fine Gravel.		
2.5-5.0	0.0	Black fine SAND, trace fine Gravel, trace Silt; Strong odor (unidentified).	RX-2 (2.5-5.0')	
5.0-7.5	0.0	Grey fine to coarse SAND, little Silt; Organic material present at 6'.		
7.5-10	0.0	Black fine SAND, trace Silt.	<u> </u>	
10-12.5	0.0	Black fine SAND, trace Silt, trace fine Gravel (at 12); Organic odor present; Wet at 12'.		
12.5-15	0.0	No recovery		RX-2 (15')
15-20	_NR	Black fine SAND, some Silt; Organic odor.		
20-25	NRNR	Black SILT, some fine Sand; Organic odor.		
25-30	NR NR	Black SILT, some fine Sand, trace fine Gravel; Organic odor.		
30-33	NR	Green/Grey SILT, some fine Sand, some fine Gravel.		RX-2 (33')

### Notes:

(+) = Grain-size distribution skewed toward end of range denoted

\* = Soil sample collected at 2.5-5.0' due to strong and distinct odor at that horizon, and potentially malfunctioning PID.

ROUX ASSOCIATES, INC.

GeoProbe Soil InvestigationLocation:Woburn, MAField Staff:HAT/LHCSoil Boring FormDate Sampled:12/4/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected	Water Sample Collected
0-2.5	13.0	Brown fine SAND, some fine Gravel.	RX-3 (0-2.5')	
2.5-5.0	1.1	Grey fine SAND.		
5.0-7.5	2.2	Black to grey fine SAND, trace fine Gravel (at 5-6)'; Grey sand limited to layer at		
7.5-10	3.3	5-6'.		
10-12.5	3.1	Black fine SAND; Wet at 13'.		
12,5-15	8.0	Suck the office, worth 15.	<u>-</u>	RX-3 (15')
15-20	8.3	Black fine SAND, trace Silt.		
20-23	31.0	Black fine SAND, some Silt.		RX-3 (23')

ROUX ASSOCIATES, INC.

GeoProbe Soil InvestigationLocation:Woburn, MAField Staff:HAT/LHCSoil Boring FormDate Sampled:12/3/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected *	Water Sample Collected
0-2.5	0.0	Brown fine SAND, trace fine Gravel (at 2').		
2.5-5.0	4.6			
5.0-7.5	0.7	Black fine SAND; Organic odor.		
7.5-10	5.2			
10-12.5	4.5	Black fine SAND, trace Gravel; Organic odor; Wet at 12'.		
12.5-15	34.5	Brack time (577725, trace Gravet, Signific State, 1727	RX-4 (12.5-15')	RX-4 (15')
15-20	36.0	Grey fine (+) to coarse SAND, trace Silt.		
20-25	71.5	Black fine SAND; Organic odor.		
25-29	73.8	Brown fine SAND.		RX-4 (29')

#### Notes:

<sup>\* =</sup> Soil sample may have been mislabeled, since it was not saturated; it likely was taken from 10-12.5'.

<sup>(1) =</sup> Grain-size distribution skewed toward end of range denoted

ROUX ASSOCIATES, INC.

GeoProbe Soil InvestigationLocation:Woburn, MAField Staff:HAT/LHCSoil Boring FormDate Sampled:12/5/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected	Water Sample Collected
0-2.5	3.2	Brown fine SAND, some fine Gravel.		
2.5-5.0	3.4	Grey fine SAND.		
5.0-7.5	2.3	Grey fine SAND; Orange layer at 5.5'.		_
7.5-10	8.1	Black fine SAND, trace Silt.	RX-5 (7.5-10')	
10-12.5	9.8			
12.5-15	10.3	Black fine SAND, trace Silt; Wet at 10'		RX-5 (15')
15-20	0.0			
20-25	7.8	Black fine SAND, some Silt.		
25-29	6.4	Black fine SAND, some Silt, trace fine Gravel.		RX-5 (29')

ROUX ASSOCIATES, INC.

GeoProbe Soil Investigation Soil Boring Form

Location: Woburn, MA

Field Staff: HAT/LHC

Date Sampled:

12/3/2002

Depth	Head Space	Descripition	Soil Sample	Water Sample
(feet)	PID (ppm)		Collected *	Collected
0-2.5	5.0	Brown fine SAND, some fine Gravel.		
2.5-5.0	1.2	Grey fine SAND, some fine Gravel; Organic odor 6-7.5'.		
5.0-7.5	4.1			
7.5-10	3.1	Black fine SAND; Organic odor.		
10-12.5	9.4	Black fine SAND, trace Silt; Organic odor; Wet at 14'		
12.5-15	293	, , , , , , , , , , , , , , , , , , , ,	RX-6 (12.5-15')	RX-6 (15')
15-20	729	Black fine SAND; Strong odor.		
20-25	204	Black fine SAND, some Silt.		
25-29	139	Black fine SAND, trace Silt; Organic odor.		RX-6 (29')

### Notes:

<sup>\* =</sup> Saturated portion of interval was not included in sample sent to lab.

ROUX ASSOCIATES, INC.

GeoProbe Soil Investigation

Location: Woburn, MA

Field Staff:

HAT/LHC

Soil Boring Form

**Date Sampled:** 12/12/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected	Water Sample Collected
		0-1' Brown fine SAND, some fine Gravel.		
0-2.5	0.0	1-2.5' Grey fine SAND, trace fine Gravel.		
2.5-5.0	19.7	Grey fine SAND, trace fine Gravel.	RX-7 (2.5-5.0')	
5.0-7.5	15.7	black fine SAND, trace Silt; Odor.		
7.5-10	8.4			
10-15	21.7	10-13' Black fine SAND, trace Silt; Odor; Wet. 13-15' Brown fine SAND.		
15-20	174	Brown to black fine SAND, some Silt.		RX-7 (15')
15-20	1/4	Blown to black tine SAND, some Sitt.	<del></del>	
20-25	129	Black fine SAND, some Silt		
25-30	NR	No recovery		
30-31	NR			RX-7 (31') RX-7 (31') DUP

Notes:

ROUX ASSOCIATES, INC.

GeoProbe Soil InvestigationLocation:Woburn, MAField Staff:LHC/RPSoil Boring FormDate Sampled:12/6/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected	Water Sample Collected
0-2.5	0.0	Grey fine SAND, some fine Gravel.		
2.5-5.0	0.0	Brown fine SAND, trace fine Gravel.		
5.0-7.5	2,2	Brown line BAND, trace line Chavet.		
7.5-10	≥2,000	Grey fine SAND, trace Silt.	RX-8 (7.5-10')	-
10-12.5	1,530	Black fine SAND, some Silt, some fine Gravel; Wet.		
12.5-15	≥2,000			RX-8 (15')
15-20	158	Black fine SAND, trace Silt.		
20-25	210	Black fine SAND, some Silt.		
25-30	35.0	Black fine SAND, some Silt, trace fine Gravel.		
30-31	NR	No recovery		RX-8 (31')

Notes:

ROUX ASSOCIATES, INC.

GeoProbe Soil InvestigationLocation:Woburn, MAField Staff:HAT/LHCSoil Boring FormDate Sampled:12/4-5/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected	Water Sample Collected
0-2.5	0.0	Brown fine SAND, some fine Gravel.		
2.5-5.0	0.3	Brown fine SAND; trace fine Gravel (at 4.5).'		⊦ <u></u> -
5.0-7.5	1,565	Brown to red fine SAND.		
7.5-10	≥2,000	Dark brown fine SAND, trace Silt.	RX-9 (7.5-10) RX-9 (7.5-10) DUP	
10-12.5	427	Brown/green fine SAND, some Silt; Wet at 12'.		
12.5-15	703	Brown fine SAND, some Silt.		RX-9 (15') RX-9 (15') DUP
15-20	370	Black fine SAND; Strong odor.		
20-25	248	Black fine SAND, some Silt.		
25-30	_NR	⊣No recovery.		
30-33	NR	The fectivery.		RX-9 (33')

Notes:

ROUX ASSOCIATES, INC.

GeoProbe Soil Investigation

Location: Woburn, MA

Field Staff: HAT/LHC

Soil Boring Form

Date Sampled: 12/12/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected	Water Sample Collected
		0-1' Grey fine SAND, trace fine Gravel.		
0-2.5	19.2	1-2.5' Brown fine SAND, some fine Gravel	RX-10 (0-2.5')	<u></u>
		2.5-3.0' Brown fine SAND, some fine Gravel		
2.5-5.0	10.4	3.0-5' Black fine SAND, some fine Gravel.		
5.0-7.5	NR			
7.5-10	NR			
10-12.5	NR	No recovery, multiple obstructions; switched to discrete groundwater sampler.		
12.5-15	NR			RX-10 (15')
15-20	NR			
20-25	NR			RX-10 (25')

Notes:

ROUX ASSOCIATES, INC.

GeoProbe Soil Investigation

Location: Woburn, MA

Field Staff:

LHC/RP

Soil Boring Form

Date Sampled:

12/6/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected	Water Sample Collected	
0-2.5	0.0	Light brown medium SAND, trace fine Gravel (at 2.5').			
2,5-5,0	0.0	Light brown fine SAND, some fine Gravel.			
5.0-7.5	912	Dark brown fine SAND, trace Silt (in layer at 6'); Red staining throughout.			
7.5-10	1,909	Dark of own fine of the D, trace on (in layer at o ), free outling in oughout.	RX-11 (7.5-10')		
10-12.5	1,574	Dark brown fine SAND, trace Silt; Odor; Wet.			
12.5-15	1,681	The state of the s		RX-11 (15')	
15-20	538	Black fine SAND; Strong odor.			
20-25	704	Black fine SAND, trace Silt.			
25-30	309	Black to brown fine SAND, trace Silt; Brown fine SAND in layer at 26'.			
30-31	NR	No recovery	:	RX-11 (31')	

Notes:

RX-12

ROUX ASSOCIATES, INC.

GeoProbe Soil InvestigationLocation:Woburn, MAField Staff:HAT/LHCSoil Boring FormDate Sampled:12/9/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected	Water Sample Collected	
0-2.5	0.0	Grey fine to medium (+) SAND, some fine Gravel.			
2.5-5.0	0,0				
5.0-7.5	0.0	Black fine SAND, trace Silt.			
7.5-10	0.0		RX-12 (7.5-10)		
10-12.5	0.0	Black fine SAND, some Silt; Stong odor; Wet at 11'.			
12.5-15	0.0	Stack line St. (5), some Sit, stong edot, Wet at 11.		RX-12 (15')	
15-20	10.0	Brown to black fine SAND; Black sand in layer at 19'.			
20-25	0.0	Black fine SAND, little Silt (at 23').			
25-30	0.0	Brown to grey fine SAND, some Silt.			
30-31	NR	No recovery		RX-12 (31')	

### Notes:

(+) = Grain-size distribution skewed toward end of range denoted

ROUX ASSOCIATES, INC.

GeoProbe Soil InvestigationLocation:Woburn, MAField Staff:HAT/LHCSoil Boring FormDate Sampled:12/9/2002

Depth Head Space Descript (feet) PID (ppm)		Descripition	Soil Sample Collected	Water Sample Collected
0-2.5	10.0	Grey fine SAND, some fine Gravel.		
2.5-5.0	6.1	Black fine SAND, some Silt. Hair-like material throughout.		
5.0-7.5	12.6	Black fine SAND, some Silt; 3"-long wood fragments at 7'.	RX-13 (5.0-7.5')	<del></del>
7.5-10	5.7	Black fine SAND, some Silt.		
10-12.5	7.9	Black fine (+) to medium SAND; Wet.		
12.5-15	0.0			RX-13 (15')
15-20	0.0	Black fine SAND, some Silt.		
20-25	0.0	20-22' Black fine to medium (+) SAND. 22-25' Brown fine SAND, trace Silt.		
25-29	0.0	Brown to black fine SAND; Black sand from 28.5-29'; Red staining at 27'.		RX-13 (29')

Notes:

(+) = Grain-size distribution skewed toward end of range denoted

ROUX ASSOCIATES, INC.

GeoProbe Soil InvestigationLocation:Woburn, MAField Staff:HAT/LHCSoil Boring FormDate Sampled:12/10/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected	Water Sample Collected	
0-2.5	0.8	Grey fine SAND some fine Gravel.	RX-14 (0-2.5')		
2.5-5.0	0.0	Brown fine SAND. Red staining at 4'.		_	
5.0-7.5	0.0	-Brown fine SAND. Fine Gravel at 5.5'			
7.5-10	0.0	The Graver at 3.3			
10-12.5	214	Brown fine SAND; Wet.			
12.5-15	NR	Brown to black fine SAND. Black sand in 4" layer at 13'.		RX-14 (15')	
15-20	3.5	Brown to black fine SAND, little fine Gravel; Black sand and gravel at 19-20'.			
20-25	0.0	Black fine SAND, some fine Gravel; Red Staining at 24'.			
25-29	NR	No recovery		RX-14 (29')	

Notes:

ROUX ASSOCIATES, INC.

GeoProbe Soil Investigation

Location: Woburn, MA

Field Staff:

HAT/LHC

Soil Boring Form

Date Sampled: 12/11/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected *	Water Sample Collected
	1	Brown to light brown CLAY, some Silt, trace fine Gravel; Organic material		
0-2.5	0.0	present.	<u> </u>	
		Red brown fine (+) to medium SAND, little Silt; trace fine Gravel (brick		
2.5-5.0	0.0	fragments).		
5.0-7.5	0.0	Yellow brown fine to medium (+) SAND, trace Clay.		
7.5-10	10.0	Light brown to black fine to medium (+) SAND, trace Silt; Wet at very bottom.	RX-15 (7.5-10')	
10-15	72.8	Brown to black fine to medium SAND, little Silt.		RX-15 (15')
15-20	6.0	Black fine SAND, some Silt; Red staining at 22'.		
20-25	3.7			
25-29	3.0	Brown fine(+) to medium SAND.		RX-15 (29')

### Notes:

(+) = Grain-size distribution skewed toward end of range denoted

<sup>\* =</sup> Saturated portion of interval was not included in sample sent to lab.

ROUX ASSOCIATES, INC.

GeoProbe Soil InvestigationLocation:Woburn, MAField Staff:HAT/LHCSoil Boring FormDate Sampled:12/11/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected	Water Sample Collected	
(1001)	112 (pp)	0-1' Brown fine SAND.		Contected	
0-2.5	0.0	1-2.5' Brown SILT, some fine Sand.			
2.5-5.0	0.0	Brown fine SAND.			
5.0-7.5	6.8	Brown to black fine SAND, some Silt. Black sand in layer at 6'.			
			RX-16 (7.5-10')		
7.5-10	70.1	Dark brown/red fine SAND	RX-16 (7.5-10') DUP		
10-12.5	16.1	Reddish Brown fine SAND; Wet at 11'.			
12,5-15	10.1	Reduish Brown file SAND, wet at 11.		RX-16 (15')	
15-20	46.4	Black fine SAND, some Silt.			
		20-23' Black fine SAND, some Silt.			
20-25	73.3	23-25' Greyish brown fine (+) to medium SAND.			
25-29	NR	No Recovery		RX-16 (29')	

Notes:

(+) = Grain-size distribution skewed toward end of range denoted

ROUX ASSOCIATES, INC.

GeoProbe Soil Investigation Soil Boring Form

Location: Woburn, MA

Field Staff:

HAT/LHC

Date Sampled:

12/10/2002

Depth (feet)			Soil Sample Collected	Water Sample Collected
0-2.5	0.0	Brown fine SAND, trace fine Gravel, trace red Silt (in layer at 4.75').		
2.5-5.0	0.0			
5.0-7.5	0.0	Reddish brown SILT, some fine Sand; 6" black silt layer at 9.5-10.0; Wet at 8'.	RX-17 (5.0-7.5')	
7.5-10	756	, , , , , , , , , , , , , , , , , , , ,		
10-12.5	1,160	Brown fine SAND.		
12.5-15	1,130			RX-17 (15')
15-20	0.0	Black fine SAND, some Silt.		
20-25	0.0	Place line (711 to), some one.		
25-30	0.0	Black fine SAND, trace Silt, trace fine Gravel.		
30-33	NR	No recovery		RX-17 (33')

Notes:

ROUX ASSOCIATES, INC.

GeoProbe Soil Investigation

Location: Woburn, MA

Field Staff:

HAT/LHC 12/13/2002

Soil Boring Form

Date Sampled:

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected *	Water Sample Collected
0-2.5	0.0	Brown fine SAND, trace fine Gravel.		
2.5-5.0	0.3	Light Brown fine SAND; Geomembrane cap observed at 3'.		
5.0-7.5	201	Light brown fine SAND.	RX-18 (5.0-7.5')	
7.5-10	NR	No recovery		
10-15	≥2,000	10-14' Brown fine (+) to medium SAND; Wet, 14-15' Dark brown SILT, some fine Sand; Reddish-purple staining at 14.5'	RX-18 (10-15')	RX-18 (13') RX-18 (13') DUP
15-20	214	Brown fine SAND, trace Silt.		RX-18 (20')
20-25	78	Brown fine SAND, some Silt.		
25-30	12			RX-18 (30')

#### Notes:

(+) = Grain-size distribution skewed toward end of range denoted

NR = No PID reading recorded

\* = Second soil sample collected in saturated zone due to staining and elevated PID reading.

ROUX ASSOCIATES, INC.

GeoProbe Soil InvestigationLocation:Woburn, MAField Staff:HAT/LIICSoil Boring FormDate Sampled:12/13/2002

Depth (feet)	Head Space PID (ppm)	Descripition	Soil Sample Collected	Water Sample Collected
0-2.5	0.0	Brown SILT, some fine Sand; Organic matter present.		
2.5-5.0	0.0	Light brown to brown fine (+) to medium SAND; Orange layer at 2.7'; Wet at 6'.	RX-19 (2.5-5.0')	
5.0-7.5	0.3			
7.5-10		Brown to dark brown SILT, some Clay, trace fine Gravel; Reddish-purple layer at 10'; Organic material present.		
10-15	623	Brown SILT, some Clay; Organic material present.		
				RX-19 (13')
15-20	872	Black fine (+) to medium SAND, some fine Gravel; Organics.		
20-25	53.6	Grey to light brown fine to medium (+) SAND.		RX-19 (22')
25-30	0.9		Ĺ	RX-19 (30')

Notes:

(+) = Grain-size distribution skewed toward end of range denoted

# **ATTACHMENT 2**

Groundwater Sampling Forms

### LOW FLOW SAMPLING FIELD FORM

Roux Associates, I	nc. 2	5 Corporate Drive, Su	ite 230 B	urlineton. l	Massachusetts 01803
		, , , , ,			

Well Number:	RX-1 15	<b>,</b>
Date:	1215102	
Location/Site:	Saluta	
Sampled by:	HAT/LHC	·

Depth to Top of Screen: Depth to Bottom of Screen:

Depth to Pump Intake: Purging Device:

Project Number: Oleie 210 m35 Cloudy 30' Site Description (Weather, Temp., etc.)

TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature ( <sup>0</sup> C)	Specific Conductivity (nS/cm) <sup>1</sup>	pН	ORPEh <sup>3</sup>	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
0900					14.35	3.071	4.91	-81.6	2.60	17	
0905					1380	2.879	7.00	-1656	-1.75	3.5	
0910					13.88	2.866	7.00	-172.0	-164	3.5	
0915		<u> </u>			1391	2.858	7.02	-194.5	-1.54	25	
0920					13.79	2.841	7.03	-206.8	-1.24	2.2	
0925		<b></b>			13.85	2.892	7.03	-2204	-116	1.9	
0930					13.92	2.817	7.04	-228 9	- 1.06p	1.9	
0935					13.68	2.817	7.04	-235.7	-0.99	2.3	
0940					13 68	2.809		-2434		3.3	
0945	·				13,70	2.810	7.05	- 247.5	- 0.90	2.3	
0950					13 42	2.810	7.05	-253 -	-0.58	1.6	
		<u> </u>									
	ļ										
·					ļ						
<u>.</u> _	<u> </u>										
				i							

1. Pump dial settings (hertz, cycles/min, etc	١.	Pump	dial	settings	(hertz.	cvc	les/min.	etc.	١
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Additional Comments:				
•		 		
	·	 	- <del></del>	 

Puttip dial settings (heriz, cycles/min, etc.)
 μSiemens per cm (same as μmhos/cm) at 25 °C

<sup>3.</sup> Oxidation reduction potential (stand in for Eh)

## LOW FLOW SAMPLING FIELD FORM

Roux Associates, Inc.	25 Corporate Drive, Suite 230	Burlington, Massachusetts 01803

Well Number:	LX-1 (30')
Date:	12/5/02
Location/Site:	Solutia/Woburn
Sampled by:	HAT / LHC

Depth to Top of Screen.

Depth to Bottom of Screen:

Depth to Pump Intake:

Purging Device:

OCYSIS Faltic

Project Number: 06626 H 35
Site Description (Weather, Temp., etc.): 30 s, Snow, Cloudy

TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature (0C)	Specific Conductivity (µS/cm)z	pН	ORP/Eh (mv)  circle onej	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1220				986	17 72	8.07	-54.2	-0.36	36	
1225				11.67	17.51	7.95	-87.8	-0.38	45	
1230			·	12.53	17.77	7.92	-118.9	-0.52	140	
1235				13.20	17.30	7.90	-160.4	-0.76	200	
1240				13.40	17 81	7.89	-1740	-0.87	220	
1245				13.43	17.88	7.89	-182.0	-0.97	260	
1250				13.47	17.92	7.89	-187.9	-0.96	270	
1255				13 58	17.92	7.89	-191.6	-0.91	270	
					<u> </u>					
	<u> </u>	1	1							

Field Parameter Stat	oilization
Turbidity (> 5 NTU, 10% for values > 1 NTU)	Temp. (3%)
DO (10%)	pH (+/- 0.1 unit)
Specific Conductance (3%)	ORP/Eh ( +/- 10 millivolts)

Additional Comments:

	P	urge Vo	lumes				
Well Diameter	ı	1.5	2	4	б	8	
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2.611	

#### LOW FLOW SAMPLING FIELD FORM

Roux Associates, Is	e 25 Co	rnarete Drive	Spite 230	Rurlington	Massachusetts 01803
INUITA MOSTULIATES, IS	IL. 43 C.U.	DOLATE DITLE	Suite 430	muniting ton,	WASSELHUSCHS GLOOD

Well Number:	RX-2 (15')	Roux Associates, I
Date:	12/2/02	
Location/Site:	Wernery / Sein	17 0

Depth to Top of Screen:

Depth to Bottom of Screen:

Depth to Pump Intake:

Purging Device:

Sampled by: HAT/LITC
Project Number: 06426W137

Site Description (Weather, Temp., etc.): 30 5. ( or ty

					0					
TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature ( <sup>0</sup> C)	Specific Conductivity (µS/cm) <sup>t</sup>	рН	(MV)	Dissolved Oxygen (DO) (mg/L)		Comments
1050				12,97	0 735	8,95	-16,3	4.31	35	
1055				13.73	1.02	8.48	.59.7	1.24	31	
1200				13 95	1,23	8,22	-85,9	1.80	13	
1105				14.08	1.34	8.13	-106.5	2,00	8.1	
110				13.78	1,440		-125-1	2.48	6.3	
i <b>!</b> 15				13.91	1.49	8.01	-130.1	2.93	6.1	
11 20				14.05	1.53	7.94	~145.0	3.31	6,0	
1135		<u>.                                    </u>		14.24	1.61	7.87	177.5	3.71	6.0	
1130				14.28	1.45	7.84	-189.6	4.04	4.4	
1135				14.33	1.69	7.82		4.56	4,2	
1140				14.35	1.70	7.81	-208.8		i4, 1	
1145				14.44	1.71	7.81	-214.0	5. 75	3.8	
1150				14.49	1.72	7.80	-218,4	5,78	3.5	
									İ	

Additional Comments:			 		 	
-	<del></del>	 		-		

Field Parameter Stabilization								
Turbidity (> 5 NTU, 10% for values > 1 NTU)	Тетр. (3%)							
DO (10%)	pH (+/- 0.1 unit)							
Specific Conductance (3%)	ORP/Eh ( +/- 10 millivolts)							

Roux Associates, Inc. 25 Corporate Drive, Suite 230 Burlington, Massachusetts 01803

Well Number:	RX-2 (331)
Date:	12/2/02
Location/Site:	SolutralWeburn
Sampled by:	HATILHE
Project Number:	06626 M35

Depth to Top of Screen:
Depth to Bottom of Screen:
Depth to Pump Intake:
Purging Device:

Site Description (Weather, Temp., etc.):

TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature (0C)	Specific Conductivity (µS/cm)2	рН	ORP Eh (mv) [circle one]	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1420				14 05	9.588	83	-218.2	0.64	400	
1425				14 24	9.670	8.32	-251.3	3.47	450	
1430				14-33	9.526	8.29	-271.3	7.45	450	
1435				14.28	9.523	8 30	-292.5	7.61	230	
1440				14-21	9.643	8.32	-295.5	7.59	180	
1445				13.98	9.643	8.28	-306.4	7 63	110	
1450				14-01	9.652	8.29	- 315.3	7.65	90	
1455				14 01	9 648	8.28	-3270	767	75	
1500				14.07	4.657	8.29	-333 5	7.68	70	
1505				13.93	9.657	8-28	- 337.0	7.68	69	

Field Parameter Stabilization							
Turbidity (> 5 NTU, 10% for values > 1 NTU)	Тетр. (3%)						
DO (10%)	pH (+/- 0.1 unit)						
Specific Conductance (3%)	ORP/Eh ( +/- 10 millivolts)						

Purge Volumes						
Well Diameter	1	1.5	2	4	6	8
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2.611

Roux Associates, Inc. 25 Corporate Drive, Suite 230 Burlington, Massachusetts 01803

Well Number:	£x-3(15')
Date:	12/4/02
Location/Site:	Solutia/Weburn, NH
Sampled by:	HAT/LHC

Project Number:

06626M35

Depth to Top of Screen: Depth to Bottom of Screen: 15' Depth to Pump Intake: persistaltic Purging Device:

30, Sunny, Light wind Site Description (Weather, Temp., etc.):

TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature (0C)	Specific Conductivity (µS/cm)1	рН	ORPEH (mv)  circle ane	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
0950				15.62	4467	7.69	-227.5	-2.07	38	
0955				15 75	4.467	7.68	- 289.0	-367	17	
1000				15.56	4.399	7.66	-272.6	-4.63	11	
1005				15.35	4.380	7.65	-285.1	- 2.80		
1010				15.26	4.382	7.65	-290.1	-2 50		
1015				15.21	4 383	7.65	-297.1	- 2.22		
1020				15 29	4.368	7.65	-302.1	-1.88		
1025				15.32	4.372	7.65	- 300.7	- 1.85		
1030		<b></b>		15.30	4.370	7.65	- 301	-1.25		
			]		]					

Additional Comments.	 _	 	_			_		 
				·				

Field Parameter Stabilization							
Furbidity (> 5 NTU, 10% for values > 1 NTU)	Temp. (3%)						
DO (10%)	pH (+/- 0.1 unit)						
Specific Conductance (3%)	ORP/Eh ( +/- 10 millivolts)						

Purge Volumes									
Well Diameter	1	1.5	2	4	6	8			
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2.611			

Roux Associates, Inc.	. 25 Corporate Drive, Suite 230	Burlington, Massachusetts 01803
Itour /1330clates, inc.	Lo Corporate Diffic, Dutte 250	mullington, massachusetts 01005

Well Number:	<u> </u>
Date:	12/4/02
Location/Site:	solutialWiburn
Sampled by:	HATILHC
Project Number:	16626M35

Depth to Top of Screen: 17
Depth to Bottom of Screen: 23
Depth to Pump Intake: Purging Device: pc/5/Sta/tic

Site Description (Weather, Temp., etc.): 305, Sunny, Slight wind

Time		<del> </del>		,, <del>-</del>		,		<del></del>		,	
1320     14.96     11.04     7.81     -332.6     -2.79     17       1325     15.24     11.16     7.74     -351.0     -3.18     18       1330     15.24     11.20     7.78     -352.9     -2.56     15       1335     15.22     11.24     7.76     -357.3     -2.05     11       1340     15.41     11.21     7.77     -357.9     -2.03     11		Water		Purged (liters or		Conductivity	рН	(mv)	Oxygen	ANTID	Comments
1325     15.24     11.16     7.74     -351 0     -3.18     18       1330     15.24     11.20     7.78     -352.9     -2.56     15       1335     15.22     11.24     7.76     -357.3     -2.05     11       1340     15.41     11.21     7.77     -357.9     -2.03     11	1315				14.26	10.93	7.82	-319.6	-330	2.3	
1330     15.24     11.20     7.78     -352.9     -2.56     15       1335     15.22     11.24     7.76     -357.3     -2.05     11       1340     15.41     11.21     7.77     -357.9     -2.03     11	1320				14.96	11.04	7.81	-332.6	-2.79	17	
1335     15.22     11.24     7.76     -357.3     -2.05     11       1340     15.41     11.21     7.74     -357.9     -2.03     11	1325				15.24	11.16	7.79	- 351 D	-3.18	18	
1340 15.41 11.21 7.77 -357.9 - 2.03 11	1330				15.24	11.20	7.78			15	
	1335				15.22	11.24	7.76	-357 3	~ 2.05	11	
1345	1340				15.41	11.21	7.77	-357.9	- 2.03	1)	
	1345				15.14	11.29	7.77	-358.3	-2.17	12	
			I								
							·				

Additional Comments:	 			
		·		

Field Parameter Stabilization							
Turbidity (> 5 NTU, 10% for values > 1 NTU)	Temp. (3%)						
DO (10%)	pH (+/- 0.1 unit)						
Specific Conductance (3%)	ORP/Eh ( +/- 10 millivolts)						

Purge Volumes								
Well Diameter	1	1.5	2	4	6	8		
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2.611		

Roux Associates, Inc.	25 Cornorate Drive.	Suite 230	Burlington.	Massachusetts 01803

Well Number: Date: Location/Site: Sampled by:

Depth to Top of Screen: Depth to Bottom of Screen: Depth to Pump Intake: Purging Device:

Project Number: 06626 435 Site Description (Weather, Temp., etc.): 20° Windy

TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature (0C)	Specific Conductivity (µS/cm)2	рН	ORPEH (MV) [circle one]	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1030				12.72	34.76	7.56	-1906	1.43	3.9	
1035				12.17	3336	7.23	-202.3	0.75	55	
1040			·	12.66	33.29	7.08	-227 D	0.56	20	
1045				14.14	32.44	7.02	-255.8	0.73	22	
1050				14.03	32.67	6.98	-274.6	0.59	5.2	
1055				14.02	32.64	6.96	-2796	0.60	3.1	
1100				14 03	32.47	6.95	-278.2	0.55	2.7	
				13.94	32 21	6.95	-283 4	0.58	2.0	
				-				ļ		
	ļ									
	<u> </u>									
	ļ								-	

Additional Comments:

Field Parameter Stabilization Turbidity (> 5 NTU, 10% for values > 1 NTU) Temp. (3%) DO (10%)

Specific Conductance (3%)

pH (±/- 0.1 unit) ORP/Eh ( +/- 10 millivolts)

Purge Volumes							
Well Diameter	]	1.5	2	4	6	8	
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2.611	

Roux Associates, Inc.	25 Corporate Drive, Suite 230	Burlington, Massachusetts 01803
-----------------------	-------------------------------	---------------------------------

Well Number: RX -4 (29') Location/Site:

Depth to Top of Screen: Depth to Bottom of Screen:

Sampled by: Project Number: 06626M35 Depth to Pump Intake: 27'
Purging Device: persistaltic

Site Description (Weather, Temp., etc.): 20°, Sunny, Wind

TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature (0C)	Specific Conductivity (µS/cm)2	pН	OREYEH (mv) [circle one]	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1400				11.48	13.30	8.34	-375.8	-1.32	100	
1405				1196	13.40	8.33	-382. L	-1.64	•	
1410				12.69	13.84	8.29	-392.9	-1.93		
1415				12.85	13.98	8.27	-395.6	-2.60		
1420				12.99	14.08	8.27	-397.4	-2.19	273	
1425				12.57	14.12	8.26	-400.1	-2.16	272	
1430				12.61	14.16	8.25	-402.7	-2.06	268	
							<u></u>			
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		}	İ							

Additional Comments:

Field Parameter Stabilization Turbidity (> 5 NTU, 10% for values > 1 NTU) Temp. (3%) DO (10%)

pH (+/- 0.1 unit)

Specific Conductance (3%)

ORP/Eh (+/- 10 millivolts)

Purge Volumes							
Well Diameter	1	1.5	2	4	б	8	
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2.611	

	-			a			
Roux Associates	, inc.	25 Cor	porate Drive,	Suite 230	Burlington,	Massachusetts 01	1803

Well Number:	RX-5 (15')
Date:	12/5/02
Location/Site:	Eintia
Sampled by:	LCIHT
Project Number:	11,1,21,1035

Depth to Top of Screen: 10 / Depth to Bottom of Screen: 1.5 / Depth to Pump Intake: 1.3 / Purging Device: Period Device: Perio

Site Description (Weather, Temp., etc.) 30' Snow

TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature ( <sup>o</sup> C)	Specific Conductivity (µS/cm) <sup>1</sup>	pН	ORI/Eh³ (mv)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
0925		<del></del>			14.76	30.45	8.32	-110.5	3.71	14.3	
0930		-			14.86	30.45	8.15	-197.8	0.92	6.12	
0935					14.74	30,54	8.15	234.5	०.न.ड	3.98	
0940					14.67	30,32	8.18	-247.4	067	4.02	
0945					14.60	30,21	8.18	- 250.3	0.56	2.32	
0950					14-61	36.03	8.19	-258.3	0.33	2.87	
0955			<u> </u>		14.63	30.02	8.19	- 258-9		2,5%	
1000					14.68	29.99	8.19	-261.2	0.30	1.83	
								1			

1.	Pump dial	settings (hertz,	cycles/min,	etc.)
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Addi	tional	Com	ments:

<sup>2.</sup> μSiemens per cm (same as μmhos/cm) at 25 °C

<sup>3.</sup> Oxidation reduction potential (stand in for Eh)

LOW FL	OW SAMPLING	FIELD RORM

		Roux Associates, Inc. 25 Corporate Drive, Suite 230	Burlington, Massachusett	ts 01803	
Well Number:	KX-5 (29)	)	Depth to Top of Screen:	24	.3
Date:	1215/02		Depth to Bottom of Screen:	29	
Location/Site:	So/utia		Depth to Pump Intake:	27	
Sampled by:	HTILC		Purging Device:	pelistaltic	_
roject Number:	OloloZiem3	5		<del></del>	

Site Description (Weather, Temp., etc.) 30 Snm

TIME (24-hr)	Depth to Water (feet)	Pump Dial¹	Purge Rate (ml/min)	Volume Purged (liters)	Temperature ( <sup>6</sup> C)	Specific Conductivity (#S/cm) <sup>1</sup>	Нq	(mv)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
/355					12.76	101.3	9,34	-355,3	0,08	467	
1400					13.23	102.7	9.17	-364.7	-0.47	745	
1405		<del></del>			13.38	107,4	8.99	-394.6	-0.41	731	
470		- <del></del>			13.86	107.8	8.94	3975	-0.26	746	
1415	<u> </u>				13.83	108,7	8.89	-398.0	-0.16	203	
14:20		·			13.81	108,3	8.88	-378.1		207	
1425		l 			13.84	108.9	8.89			195	
1430		 			13.89	109.1	8.91	399.4	0.21	190	
							<u> </u>				
<del></del>						<u> </u>	<u> </u>		<u> </u>		
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	1	}			}	1				1	

1	Pupp d	lial setting	s thertz	eveles/min.	etc )

Additional Comments:		
	· · · · · · · · · · · · · · · · · · ·	
	· · · · · · · · · · · · · · · · · · ·	

Pump dial settings (hertz, cycles/min, etc.)
 μSiemens per cm (same as μmhos/cm) at 25 °C

<sup>3.</sup> Oxidation reduction potential (stand in for Eh)

Roux Associates, Inc. 25 Corporate Drive, Suite 230 Burlington, Massachusetts 01803

 Well Number:
 12x - 6 15'

 Date:
 1213162

 Location/Site:
 561444

 Sampled by:
 10147

 Project Number:
 06616M35

Depth to Top of Screen:

Depth to Bottom of Screen:

Depth to Pump Intake:

Purging Device:

Site Description (Weather, Temp., etc.):

TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature (0C)	Specific Conductivity (µS/cm)2	pН	ORPEh (mv) [circle one]	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1040				14.05	6.070	7,71	-344.1	-6.61	23	
1045				15.27	6.109	7.69	-351.6	-3.23	50	
1050				15.17	6.197	7.67	-366.5	-2.06	60	
1055				15.15	6.202	7.66	-374.0	- 2.10	70	
1100				15.13	6.207	7.66	-374 7	-2.13	60	
1105				15,13	6 207	7.66	-374.7		75	
1110				1497	6 233	7.67	-369.1	-2.38	37	
1115				14.99	6.235	7.67	-3755	-2.53	35	
1120				15.10	6.230	7.67	-380. D	-2.07	30	
1125				15.19	6.249	7.66	-350·b	-1.81	25	
1130				15.14	6 250	7.66	-355.5	-172	25	
1135				15.09	6.261	7.66	-359.0	-1.72	23	
·										

Field Parameter Stabilization						
Turbidity (> 5 NTU, 10% for values > 1 NTU)	Temp. (3%)					
DO (10%)	pH (+/- 0.1 unit)					
Specific Conductance (3%)	ORP/Eh (+/- 10 millivolts)					

[	P	urge Vo	lumes				
Well Diameter	1	1.5	2	4	6	8	
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2.611	

Roux Associates, Inc.	. 25 Cornorate Drive, Suite 23:	30 Burlington, Massachusetts 01803

 Well Number:
 Date:
 12/3/02

 Location/Site:
 Solution

 Sampled by:
 1C/HT

 Project Number:
 DL626 M35

Depth to Top of Screen: 24'

Depth to Bottom of Screen: 29'

Depth to Pump Intake: 27'

Purging Device: 0C1515taltic

Site Description (Weather, Temp., etc.): 70° Windy

					· · · · · · · · · · · · · · · · · · ·					
TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature (0C)	Specific Conductivity (µS/cm)2	рĦ	(niv) [circle one]	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
14 50				12.94	97.65	7.58	-395.7	- U. 79	320	
1455				13.68	105.1	7.24	-405.9	-0.43	305	
1500				13.62	107.3	7.10	-407.9	-2.13	2 <i>A</i> 3	
1505				13 49	108-1	7 19	-408.6	-2.48	197	
1510				13.49	158.1	7.19	-408.6	-2.48	188	
1515				13.50	108.7	7.18	-408.9	- 2.51	194	
1520				13.56	108.9	7.18	-4087	-2.58	197	
1525				1357	109.4	7.16	-408.7	-2.59	129	
							_			
	<b></b>									
										_

Field Parameter Stabilization									
Turbidity (> 5 NTU, 10% for values > 1 NTU)	Temp. (3%)								
DO (10%)	pH (+/- 0.1 unit)								
Specific Conductance (3%)	ORP/Eh ( +/- 10 millivolts)								

Purge Volumes												
Well Diameter	I	1.5	2	4	6	8						
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2.611						

Roux Associates, Inc. 25 Corporate Drive, Suite 230 Burlington, Massachusetts 01803

 Well Number:
 Part (15')

 Date:
 12/12/02

 Location/Site:
 Solution

 Sampled by:
 HT/LC

 Project Number:
 0 (a 6.2 6 M 35)

Depth to Top of Screen: 10'

Depth to Bottom of Screen: 15'

Depth to Pump Intake: 15.45'

Purging Device: 0e1515talfic

Site Description (Weather, Temp., etc.): 30s, rank

TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature (0C)	Specific Conductivity (µS/cm)2	рН	ORP/Eh (mv) (circle ane)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
U905				13 58	5.943	5.22	-79.7	3.58	115	
0910				13.31	6.140	5 73	-934	427	77.4	
0915				13.35	6.105	5.79	-91.0	5 24	79.0	
0920				13.43	6.192	6.03	-88.4	6.45	65.3	
0925				13.40	6.248	6.04	-281	6.09	55.6	
0930				13.40	6.255	6.10	-88.4	6.38	62.1	
0935				1347	6.255	6-11	-88.9	6.45	637	
0940				13.43	6.157	6.15	-88.1	6.68	68.4	
								_		
		, <u> </u>								
					<u> </u>					

Field Parameter Stabilization										
Turbidity (> 5 NTU, 10% for values > 1 NTU)	Temp. (3%)									
DO (10%)	pH (+/- 0.1 unit)									
Specific Conductance (3%)	ORP/Eh ( +/- 10 millivolts)									

Purge Volumes											
Well Diameter	1	1.5	2	4	6	8					
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2.611					

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1.46	

Well Number: RX-7 (31) Date:

Cloude

Location/Site: Solution Sampled by:

Project Number: 0662635 Site Description (Weather, Temp., etc.) \_\_\_\_\_36 '

Depth to Top of Screen: 26/ Depth to Bottom of Screen: 31/

Depth to Pump Intake: 291

Purging Device: Peristaltic

TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature	Specific Conductivity (µS/cm)³	рĦ	ORI/Eh³	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1330					12 44	8.468	7.19	-307,6		71.0	
1335					13.17	8.702	7.09	-346.9	1.90	67.9	
1346					13.46	9.267	6.92	-375.1	1.17	48.4	
1345	- 	L			13.39	9.388	6.92			443	
1350	<u> </u>				13.41	9.527	10.87	-378,2	0.90	46.7	
1355					13.42	9.578	6.88	-377.8	0.83	46.7	
1400	<u> </u>				13.38	9,607	6.86	-378.5	0.34	46.3	
	<u> </u>	<u> </u>									
	<u> </u>										
 	<u> </u>										
<b> </b>	<u> </u>	<u></u>									
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1										1	

1. Pump dial settings (hertz, cycles/min, etc.)	1.	Pump	díal	settings	(hertz,	cycl	es/min.	etc.)
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3. Oxidation reduction potential (stand in for Eh)

Additional Comments:	Sampled	@	1405	 	
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<sup>2.</sup> μSiemens per cm (same as μmhos/cm) at 25 °C

		TOUR TESSOCIAL
Well Number:	RX-8 (15')	
Date:	12/4/02	
Location/Site:	Schride	

Depth to Top of Screen:
Depth to Bottom of Screen:

Location/Site: Solutia
Sampled by: BPLC

Depth to Pump Intake: 3" of the Bottom

Purging Device: Peristantic

Project Number: 06626 m35

Site Description (Weather, Temp., etc.) 30', Snaw

TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature ( <sup>0</sup> C)	Specific Conductivity (µS/cm)³	pН	OR)/Eh³ (mv)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1045					16.67	5.008	7-33	-22712	0.81	210	
1050					10.78	4.945	7.01	-235.6	0.01	ΝÔ	
1055					10.95	4.813	6.85	-245.8	-0.0ic	98	
1100				<u></u>	10.95	4.882	6.80	-256.8	-001	70	
1105					11.03	4.843	6.73	-245.7	-0.28	70	
1110					11.63	4.813	6.70	-254.9	-0.32	65	
1115					11.14	4.781	10.71	-262.7	-0. ZY	54	
1120					11.17	4.762	6.64	-279.2	-0.39	37	
1125					11.57	4.738		-2921	-0.40	34	•
1130				<u> </u>	11.03	4.705	6.61	-294.1	-0.39	32	
1135					11,05	4.702	6.61	3153	040	34	
1140					11.16	4.686	6-61	1 : -		31	
1145					(1-1)	4.679	6.61	-312,3	-0.38	29	
1150					11.00	180 4	661	311.8	-0.35	27	
											:
							1				

1.	Pumo dial	settings (	(hertz.	cycles/min,	etc.)	

2. μSiemens per cm (same as μmhos/cm) at 25 °C

3.	Oxidation	reduction	potential	(stand	in	for	Eh)	

Additional Comments:	
	-

Roux Associates, Inc. 25 Corporate Drive, Suite 230 Burlington, Massachusetts 01803

Well Number: Date: Location/Site: Sampled by: 06626435

Depth to Top of Screen: Depth to Bottom of Screen: -Depth to Pump Intake: 3" off bottom Purging Device: Geophie

overcast Site Description (Weather, Temp., etc.):

TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature (0C)	Specific Conductivity (µS/cm)2	рΗ	ORY/Eh (mv) [circle one]	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1450		< 100m/		13.16	9 113	7.65	-362.9	4.48	362	
1455				13.66	9.443	7.63	- 381 9	1.23	219	
1500				13.89	10.15	7.64	-384.2	1.45	140	
1505				13.81	10.25	7.62	-384.1	1.56	113	
1510				13.74	10.29	7.61	-385.2	2.59	108	
1515				13.71	10.31	760	-385 &	1.47	104	
1520				13.72	10.29	7.58	-385.8	1.39	101	
1525			2.5	13.70	10.36	7.58	-386.0	1.42	098	
	į									

Additional Comments:

Project Number:

Field Parameter Stabilization							
Turbidity (> 5 NTU, 10% for values > 1 NTU)	Temp. (3%)						
DO (10%)	pH (+/- 0.1 unit)						
Specific Conductance (3%)	ORP/Eh ( +/- 10 millivolts)						

Purge Volumes								
Well Diameter	1	1.5	2	4	6	8		
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2 611		

Roux Associates, Inc. 25 Corporate Drive, Suite 230 Burlington, Massachusetts 01803

Well Number:	KX-9 (15')
Date:	12/4/02
Location/Site:	Solutia - Wiburn
Sampled by:	HATILHO

Depth to Top of Screen: 10'

Depth to Bottom of Screen: 15'

Depth to Pump Intake: Purging Device:

Sampled by: HAT/LHC
Project Number: 06626 M35
Site Description (Weather, Temp., etc.): 305, Sunny, 81ight wind

TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature (0C)	Specific Conductivity (µS/cm)1	pН	ORP/Eh (mv) [circle une]	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1005				12.59	20.54	7.07	-63.4	3. <del>7</del> 5	170	
1010				12.59	20.79	6.77	-68.9	2.48	140	
1015				12.59	20.79	6.77	-68.9	2.48	130	
1020			=	12.43	12.01	5.92	-98.7	0.64	100	
1025				1246	20.99	5.93	-98.6	0.61	100	
1030				12.44	20.93	5.93	-103.9	0.71	104	
1035				12-33	20.89	5.91	-108.5	0.53	90	
1040				12.46	20.84	5.89	-108.7	0.55	90	
1045				12.86	20.83	5.89	-104.5	0.50	80	
/050				12.76	20.84		-109.9	0.55	80	
1055				12.70	20.80	5.88	-112.9	0.50	75	
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Additional Comments:

Field Parameter Stabilization

Turbidity (> 5 NTU, 10% for values > 1 NTU)

DO (10%)

Specific Conductance (3%)

Field Parameter Stabilization

Temp. (3%)

pf1 (+/- 0.1 unit)

ORP/Eh (+/- 10 millivolts)

Purge Volumes									
Well Diameter	1	1.5	2	4	6	8			
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2.611			

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Roux Associates, Inc	. 25 Corporate Drive, Suite 230	Burlington, Massachusetts 01803
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 Well Number:
 EX-9
 331

 Date:
 12/5/02

 Location/Site:
 50 Luha

 Sampled by:
 LC/HT

Depth to Top of Screen: 28'

Depth to Bottom of Screen: 33'

Depth to Pump Intake: 31'

Purging Device: Dersi Staltic

Project Number: 06626M35

TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature (0C)	Specific Conductivity (µS/cm)2	pН	ORF/Eh (mv)  circle one	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
. <u></u>	-									
-										

Additional Comments: Very Low flow, unable to pump at Steady rate collect sample at 0845

Field Parameter Stabilization

Turbidity (> 5 NTU, 10% for values > 1 NTU)

DO (10%)

Specific Conductance (3%)

Field Parameter Stabilization

Temp. (3%)

pH (+/- 0.1 unit)

ORP/Eh (+/- 10 millivolts)

Purge Volumes								
Well Diameter	1	1.5	2	4	6	8		
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2.611		

		LOW PLOW BAIM LING P	ILLO FORM		
	Roux Associate	es, Inc. 25 Corporate Drive, Suite 230	Burlington, Massachusetts	: 01803	
Well Number:	RX-10 (15')		Depth to Top of Screen:	10 '	· *
Date:	211202		Depth to Bottom of Screen:	151	
Location/Site:	Soluta		Depth to Pump Intake:	]4'	
Sampled by:	HT/4		Purging Device:	peristaltic	
Project Number:	Note 24 M35		_	V	-
Site Description	(Weather, Temp., etc.) 305	ain			

TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature (°C)	Specific Conductivity (µS/cm)'	рН (	ORP/Eh³ (mv)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
0925					13.10	6.314	707	3176	2.93	27	
0930					12.09	6.366	7.66	-324.5	3.29	7.1	
0935					11.91	6.376	7.00	-325.6		56	
0940					11.47	6.466	7.02	-330.9	5.14	4.5	
0945		<u> </u>	ļ	<u> </u>	11.43	le. 462	7.01	-330.5	4.44	3.9	
0950	<u> </u>				11.42	6.456	7.01	-333.7	369	32	
0955					11.39	6.442			3,42	3.9	
1080	<u> </u>				11.48	6.372	7.02	- 327.	3.69	3.8	
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1.	Pump	dial	settings	(hertz,	cycles/min,	etc.)
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2. μSiemens per cm (same as μmhos/cm) at 25 °C

Additional Comments:	Sampled	(a)	1005	<del></del>	 	
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		<del></del>									
TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature (°C)	Specific Conductivity (µS/cm)'	pH	ORP/Eh³ (mv)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1210					9.43	8.074	8.16	-317.1	8.50	150	
1215					9.55	8.486	8.22	-324.0	8.10	120	
1220	<u> </u>				10.07	8.732	8.14	-323.8	7.04	45	
1225					10.41	8.923	7.99	-3329	7.34	38	
1230					10.42	9.030	7.81	-334.0	6.58	65	
1235					10.48	9.101	774	-333.9	6.57	70	
1240					10.47	9.087	7.71	- 330.0	6.70	70	
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	١, ١	Punip	dial	settings	(hertz,	cycles	mιπ,	etc.)	)
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Additional Comments:	Begin	purap	1145,	Samole	1245		
<del>-</del>	<del> </del>	7		7			
-						 	

<sup>2.</sup> μSiemens per cm (same as μmhos/cm) at 25 °C

<sup>3.</sup> Oxidation reduction potential (stand in for Eh)

	_		_	
Roux Associates.	Inc.	25 Corporate Drive, Suite 230	Burlington	, Massachusetts 01803
				,

Well Number:	KX-11 (15')
Date:	216102
Location/Site:	Solutia
Sampled by:	BPILC

Depth to Top of Screen: 10

Depth to Bottom of Screen: 15

Depth to Pump Intake: 14-7

Purging Device: peristatty

Project Number: Cle (c 7 ic 17)35

Site Description (Weather, Temp., etc.) 305, 500

	<del></del>	r=	•								
TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature ( <sup>0</sup> C)	Specific Conductivity (\$\$/cm)	pН	ØRP/Eh³ (mv)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
0935			L100		13.82	2.109	7.31	.2931	1.66	50	
0940					13.84	2.010	7.29	-307.8	1.50	26	
0945					13.81	1.987	7.28	-3036	107	22	
0950					13.83	1.976	7,28	-311.6		19	
0955					13,71	1-964	7.27	-3098	0.71	17	
1000					13,82	1.950	7.27	307.6	0.82	17	
1005	- -				13.87	1.947	7.26	-305.2	0.85	16	
1010					13,89	1.946	7.24	-306.	0.81	15	
l							<u> </u>		\ \		
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						<u> </u>					<u> </u>
N.							L				

l. Pump dial settings (hertz,	, cycles/min, etc.)
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3.	Oxidation	reduction	on potent	tial (stand	in for E	h)

Additional Comments:	
	~~~~ <del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>

<sup>2.</sup> μSiemens per cm (same as μmhos/cm) at 25 °C

Rouv	Accordates	Inc	25 Corporate Driv	in Cuita 730	Ruelington	Maccachusatte 0	1907
ROUX	assuciates,	me.	25 Corporate Diff	re, Suite 230	burnington,	massachusens u	11003

Well Number: <u>RX-11 (3)</u> Date: 12/6/102 Location/Site:

Salutia BPILC

Sampled by: Project Number: 0101026135

30 snow Site Description (Weather, Temp., etc.)

Depth to Top of Screen: Depth to Bottom of Screen: Depth to Pump Intake: Purging Device:

TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature (°C)	Specific Conductivity (µS/cm)'	pН	ØRIYEh³ (mv)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1335					13.54	9.553	8.14	-328.2	2.04	400	
1346					13.36	9.851	8.12	-337.8	1.12	220	
1345					13,36	9.575	8.12	-311.7	1.02	130	
1350					13.46	9.546	8.11	-311.0	1. Zlp	100	
1355					13.62	9.570	8.10	-316.0	090	60	
1400					13.33	9597	8.10	-321.6	0.81	60	
1405	<u> </u>				ال 3.36	9.583	8.10	-3221	0.81	54	
1410					13,34	9.527	8.09	325	0.80	52	
1415			<u></u>	35gal	13.34	9.519	8.00	-327.8	0.78	51	
					<b>+</b>			ļ			
ļ	<u> </u>										

١.	Punin d	lial settir	ies (hertz	cycles/min,	etc.)
	. up u	,,		C C C C C C C C C C C C C C C C C C C	

Additional Comments:			
		•	

μSiemens per cm (same as μmhos/cm) at 25 °C

<sup>3.</sup> Oxidation reduction potential (stand in for Eh)

<del></del>	<del></del>							<del></del>			
Wel	l Number:	RX-	-12 (5°)	Roux Associa	LOW FI	LOW SAMPL		Burlington	M , Massachuse op of Screen:	10	
	Date:	12/9	02				D		om of Screen:		
	cation/Site: ampled by:	<u> </u>	ATIA T/LHC						Pump Intake: ] rging Device:		ristaltic
	et Number:	00	o 626m3	5				1 u	iging Device.	- 14	71318.171
S	Site Descript		ner, Temp., etc.)		F, wir	idy, 51	mny	Σ			
TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature (°C)	Specific Conductivity (pS/cm) <sup>2</sup>	рН	ORPEH	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1010					12-18	63.9	5.87	60,3	7.60	24.9	
1015					13.64	2.092	5.75	25.8	3.20	126	
1026					14.15	2006	5.73	-57.0	2.39	7:32	
1025	1				14.66	2.051	5.74	74.4	2.08	5.29	
1030					14.66	2.014	5.74	-94.5	2 62	3.24	
1035					14.08	2.015	5.76	-100.3	2.87	4.36	
1640					14.27	2.005	5.78	-1091	3.35	364	
i045					14.39	2.004	5.78	-112-6	3.55	4.57	
1050					14.45	1.999	5.78	1	3.65	3.18	
					<u> </u>						
		<u> </u>									
- <del></del>											
		1	1	1	1	1	1	1	1	ı	<b>5</b>

1. Pump dial settings (hertz, cycles/i	min,	etc.}
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Additional Comments:		
	·	

μSiemens per cm (same as μmhos/cm) at 25 °C
 Oxidation reduction potential (stand in for Eh)

Roux Associates, Inc.	25 Corporate Drive, Suite 230	Burlington, Massachusetts 01803

	Roux Associa
Well Number:	RX-12 (31')
Date:	1219/02
Location/Site:	Solutia
Sampled by:	HAT/LHC

Project Number:

26 Depth to Top of Screen: Depth to Bottom of Screen: 30 Depth to Pump Intake: peristaltic Purging Device:

Clebe Zum35 Site Description (Weather, Temp., etc.) 30, Surviva

TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature (°C)	Specific Conductivity (aS/cm) <sup>1</sup>	рН	ORIVEh <sup>3</sup> (mv)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1336					12.32	3.040	6,24	-68.8	3.29	834	
1335			 		13.56	3.05)	6.15	-895	2,13	ER3	
1340					13.88	3,046	6.09	108 5	2.11	ERZ	
1345		L			13,47	3,045	6.07	-119.6	2.08	EK3	
1350					13.37	3.038	6.04	-132.4	2.16	ER3	
355					13.26	3.648	6.63	-135.9	ſ	Ex3	
1460					13.29	3.029	6.02	-135.6	ì	ER3	
1405					12.39	3.031	6.03	137.3		298	
1410					12.61	3.018	6.01	-142.9		745	
1415					12.61	3.013	6.02	-144.8	2.18	786	
1426					12.41	3,026	6.02	-146.6	2.20	624	
1425					12 41	3r 022	6.01	-147.6	2.20	593	
1430					12.12	3.01	# 6.0	2-1471	2.19	570	

1. Pt	ımp dial	settings (hertz,	cycles/min,	etc.)
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Additional Comments:	Bearin	ouras	1248	
,	7	<del>,                                    </del>		

<sup>2.</sup> µSiemens per cm (same as µmhos/cm) at 25 °C

<sup>3.</sup> Oxidation reduction potential (stand in for Eh)

Done	Associates	Inc	25 Cor	porate Drive,	Suite 230	Ruglington	Maccachuratte 01903
Roux	Waanciates	mc.	23 CUI	horare Dilike	Suite 230	Durungton,	Massachusetts 01803

Winde

Well Number: RX-13 (15')
Date: 12 | 9 | 102

Location/Site: Solutia

Sampled by: HAT / LHC
Project Number: Oblo210M35

Site Description (Weather, Temp., etc.)

Depth to Top of Screen: 15 /

epth to Bottom of Screen: 15 Depth to Pump Intake: 14

Purging Device: peristaltic

TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature ( <sup>B</sup> C)	Specific Conductivity (#S/cm) <sup>2</sup>	pH	ORP/Eh³	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
0945					13.37	3,481	632	-26.4	4.22	3.30	
0950					14.07	31520	6.32	-8.6	1.51	2.42	
0955					14.09	3.532	6.32	-13,0	1.42	2.31	
1000	<u> </u>				14.26	3:542	ı	-215	1.38	2.51	
1005				<u> </u>	14.55	3,554	6.32	-40.8	1.09	158	
1018					14.74	3:543	6.32	-41.8	0.99	1.54	
1015					14.76	3.555	6.33	-46.9		1.36	
1020					14.65	3,537	6.32	-51.4	0.92	1.28	
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										<u> </u>	
1											

1	Pump dial	cettings	Chertz	cycles/min,	etc )
٠.	i minh miai	semmes	(HEHZ, C	cycles/mm,	CIU.)

dditional Comments:	
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<sup>2.</sup> μSiemens per cm (same as μmhos/cm) at 25 °C

<sup>3.</sup> Oxidation reduction potential (stand in for Eh)

Roux Associates,	Inc.	25 Сог	porate Driv	ve. Suite	230	Burlington,	Massachus	setts	01803
itoux iissociates,		-5 -00.	PO. H.C D	, c, care	20	marmagion,	1,14334614	,,,,,	

pН

Specific

Conductivity

S/cm)

(291) Well Number: Date:

Purge Rate

(ml/min)

Location/Site: Solution Sampled by: LHC/HAT

Depth to

Water

(feet)

TIME

(24-hr)

Project Number: 06626m35 Site Description (Weather, Temp., etc.)

Pump

Dial<sup>1</sup>

25°F Sunny

Volume

Purged

(liters)

Temperature

(<sup>0</sup>C)

Depth to Top of Screen: Depth to Bottom of Screen: Depth to Pump Intake: 2.7 Purging Device: peristaltie

Dissolved QRP/Eh3 Turbidity Comments Oxygen (NTU) (mv) (DO) (mg/L)

1400		\	 		, I.			1		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1400		11.63	7.128	7.29	-16.1	4.26	220		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1405		11.49		7.20	-45.6		149		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1410		11.95	7-127	7.19	-72.0	1.14	145		
1426     1214     7.157     7.18     -96.3     0.77     83.6       1425     1227     7.190     7.18     -109.6     0.69     78.3       1430     11.84     7.184     9.17     -121.5     0.76     61.5       1435     11.86     7.186     7.17     -122.7     0.69     59.3	<u> </u>		12.09	7.152	718	-945	0 98	95.5		
1425     1227     7 190     7.18     -109.6     0.69     78.3       1435     11.84     7.184     7.17     -121.5     0.76     61.5       11.86     7.18     7.17     -122.7     0.69     59.3	1426		1214	7.157	7-18	-96,3	0.77	83.6		]
1435 11.86 7.186 7.17 -122.7 0.69 59.3	) 425		12.27	7 190	7.18		0.69	78,3		
المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال المتحال ال	1430		11.84	7.184	7.17	-121.5	0.70	61.5		
1446 11-85 7-180 7-17 -1267 0.48 55,7	1435		11.86	7.186	7.17	-122.7	0.69	593		
	1448		11-85	7.180	7.17	-126.7	0.68	55,7		
									_	
						]				

1. Pump dial settings (hertz, cycles/mir	n, etc.)
------------------------------------------	----------

2. μSiemens per cm (same as μmhos/cm) at 25 °C

3. Oxidation reduction potential (stand in for Eh)

Roux Associates, Inc. 25 Corporate Drive, Suite 230

Sunne

Burlington, Massachusetts 01803

Well Number: Date:

Location/Site: Sampled by:

Project Number: 06026m35 Site Description (Weather, Temp., etc.)

Depth to Top of Screen: Depth to Bottom of Screen:

Depth to Pump Intake: 28

Purging Device:

TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature (°C)	Specific Conductivity (pS/cm)'	pН	RPEh³	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1255					14.24	2.847	10.01	-62.4	7.68	ERZ	
1300	<u> </u>			· · · · · · · · · · · · · · · · · · ·	14.32	2.849	6.17	-70.6	6.94	EK2	
1305					14.19	2.864	6.29	-66,6	7.70	1100	
1310		L	 		14.20	2.888	6.19	-94.6	3,85	1100	
1315				<u></u>	14.31	2.880	42/	-98.2	2,53	1100	
1320		<u> </u>			14.20	2.892	4.18	-97.2	2,22	ER2	
1325					14.48	2,898	6.21	100.9	1.93	EX2	
1330			<u> </u>		14.38	2.90/	6.22	-99.1	1.93	1000	
1335					14.39	2.890	6.22	-96.9	2.01	650	
1340		<u> </u>			14.44	Z.888	6.21	-90.3	2.36	550	
13745			ļ		14.33	2.893	6.22	-05.1	2.60	450	
1350	<u> </u>	ļ <del>.</del>			14.42	2.890	6.21	-81.0	2.90	450	
1355					14.38	2.885	6.21	-805	2.80	420	
								<u> </u>			
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1	Pumn	dial	cettings	therta	cycles/min.	etc \
٠,	Lunip	ulul	actunga	(LICIAL,	CYCICS IIIIII,	

Additional Comments:	

Pump dial settings (hertz, cycles/nin, etc.)
 μSiemens per cm (same as μmhos/cm) at 25 °C

<sup>3.</sup> Oxidation reduction potential (stand in for Eh)

Ţ	OW EL	OW SAL	MPLING	EIGID	RORM
1.		11 ()/51	711 1/1/15	1 1 1 1 1 1 1 2	1, 1 1 1 7 1 4 1

Roux Associates, Inc. 25 Corporate Drive, Suite 230 Burlington, Massachusetts 01803

Weil Number:	KX-15 (151)
Date:	12/11/07
Location/Site:	Salvaria a

Depth to Top of Screen:

Depth to Bottom of Screen:

Depth to Pump Intake:

Purging Device:

15 ' 14 '

Sampled by: +17/1C

Project Number: 6/6/62/6/7/35

Site Description (Weather, Temp., etc.) 30 Clinds

	<del>,                                    </del>								<del></del>		
TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature (°C)	Specific Conductivity (µS/cm) <sup>1</sup>	pН	ØRPEh <sup>3</sup> (mv)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
0945					12.99	4.710	7.79	-23,5	1.86	35	
0950					13.11	4.605	7.31	-48.6	1.36	23	
0955					13.32	4.485	6.84	- 66.1	1-16	79	
1000		<u> </u>			13.26	4.434	6.68	-78.0	12/	17	
1005					13.36	4.387	6.57	85%	1.26	17	
1010					13.26	4.386	654	-93.1	1.29	17	
1015					13.11	4,333	6.53	-1004	1.34	18	
1020			<u></u>		13.11	4.327	6.49	- 103.0	134	17	
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					<u> </u>			<u> </u>			
											:

1.	Pump	dial	settings	thertz	cycles/min,	etc \
٠.	unip	Giui	Berrie	(	eyercariiiii,	cic.,

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<sup>2.</sup> μSiemens per cm (same as μmhos/cm) at 25 °C

<sup>3.</sup> Oxidation reduction potential (stand in for Eh)

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Roux	Associates.	Inc.	25 Cc	orporate Drive	Suite 230	Rurlington	Massachusetts 0180
IVUHA .	WOOD FINITO	THE.		JI POLAIC DIIYE	Julie To	Dui incivii.	INTRASSPERIOSECTS OFFICE.

Well Number: RX-15 (291) Date: Location/Site:

Depth to Top of Screen: Depth to Bottom of Screen: Depth to Pump Intake:

Purging Device:

Sampled by: Project Number: 10 m35

Site Description (Weather, Temp., etc.)

T1ME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature	Specific Conductivity (aS/cm)'	рН	ORPEh <sup>3</sup>	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1305					13.41	2.658	4.96	-763	2.18		
1310					14.26	2.692	7.62	-97.2	1.07		
1315		· · · · · · · · · · · · · · · · · · ·			14.41	2.688	7.08	108.5	1-18		
1320				- <del></del>	14.47	2.692	7.08		1.25	781	
1325					14.44	2.693	1	-114.6	1.30	726	
1330					14.41	2.694	7.69	-116.7	1.25	435	
13.35					14.43	2.691	7.11	-118.6	1.18	451	
1346					14.44	2.643	7.12	-119.0	1.14	436	
1345				·	14.39	2.645	7.18	-119.7	1.13	405	
1350					14.44	2.693	7.11	-120.6	1.13	353	
1355					14.48	2.692	7.10	-120.4	1.14	308	
1400					1447	2.690	711	-121.0	1.14	238	
1400					14.49	2.688	7,10	<del></del>		225	
1410		 	<u> </u>		14.48	2.689	7.11	-121.0	1.14	219	
					<del></del>		<del> </del>				
		<del> </del>	ļ		<del></del>		<u> </u>				
			<u> </u>	,			ļ				

1. Pump dial settings (hertz, cycles/min, etc.)

2. μSiemens per cm (same as μmhos/cm) at 25 °C

3. Oxidation reduction potential (stand in for Eh)

dditional Comments:	begin
	7

- pumping 1245

Roux Associates.	Inc.	25 Corporate Drive, Suite 23	10 Burlington.	Massachusetts 01803
11044 110401.4140,	~~~~	ar corporate string and a		ILLEGATE POPULA GIOCO

Well Number:	RX-14 (15')
Date:	12/11/02
Location/Site:	Solutia
Sampled by:	LC/HT

066263M35

Depth to Top of Screen: 10 /
Depth to Bottom of Screen: 15 /
Depth to Pump Intake: 13 /

Purging Device: peristaltic

Site Description (Weather, Temp., etc.)

Project Number:

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1026     14.03     4.557     5.90     -12.3     1.48     18       1025     13.69     4.566     5.91     -11.8     2.02     3i       1036     13.69     4.545     5.91     -7.6     2.49     11       1035     13.66     4.545     5.90     -7.3     2.52     9.5       1040     13.61     4.538     5.91     -4.1     2.99     9.2	
1025     13.69     4.566     5.91     -11.8     2.02     31       1036     13.69     4.545     5.91     -7.6     2.49     11       1035     13.66     4.545     5.90     -7.3     2.52     9.5       1040     13.61     4.538     5.91     -4.1     2.99     9.2	
1036     13.69     4.545     5.91     -7.6     2.49     11       1035     13.66     4.545     5.90     -7.3     2.52     9.5       1040     13.61     4.538     5.91     -4.1     2.99     9.2	
13,66 4.545 5.90 - 7.3 2.52 9.5 1040 13.61 4.538 5.91 -4.1 2.99 9.2	· · · · · · · · · · · · · · · · · · ·
1040   13.61 4.538 5.91 -4.1 2.99 9.2	· · · · · · · · · · · · · · · · · · ·
<del></del>	
1045   13.64 4.534 5.92-2.6 3.13 8.9	
1050	

1. Pump dial settings (hertz, cycles/min, etc.)	l.	Pump dial	settings (hertz,	cycles/min.	etc.)
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2. μSiemens per cm (same as μmhos/cm) at 25 °C

		-		-	
3.	Oxidation	reduction	potential	(stand in f	or Eh)

Additional Comments:	Collect	sample @	1055
	<u> </u>	· ,	

Roux Associates, Inc. 25 Corporate Drive, Suite 230 Burlington, Massachusetts 01803

Well Number:	(29')	
Date:	12111/02	

Depth to Top of Screen: \_ Depth to Bottom of Screen: \_

Location/Site: Solh fla

Depth to Pump Intake:

Sampled by: LC/HT
Project Number: Clair2 (a m 3 S

Purging Device: peristaitic

Site Description (Weather, Temp., etc.) 25 28, Clandy

				<u> </u>							
TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature (°C)	Specific Conductivity (nS/cm)'	pН	ØR)P/Eh³ (mv)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1305					14.76	3.578	7.0%	-4.0	0,72	860	
1310					14.69	3,535	7,07	- 58,6	1,04	740	
1315					14.71	3.538	7.07	-59.2	0,90	750	
1326					13.60	3.578	7.08	74.8	1.10	430	
1325					13.64	3,572	7 08	79.6	1.21	320	
1330					13.56	3.553	7.09	-846	1.14	284	
/335					13.48	3.531	7.08			296	
1346	<u> </u>				13.45	3528	7.08	-91.3	1.35	310	
1345	1				13.43	3,521	7.08		158	305	
1350					13.34	3,501	7.08	-923		295	
1355	†				/3,38	3.499	7.0	-92.8	1.64	308	
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1. Pump dial settings (hertz,	cycles/min, etc.)	
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3. (	Oxidation	reduction	potential :	(stand in	for Eh)

Additional Comments:	Sampled	(a) 1	405
		_	•

<sup>2.</sup> μSiemens per cm (same as μmhos/cm) at 25 °C

LOW FLOW SAMPLING FIELD FO	ORM
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			9		
	Roux As	sociates, Inc. 25 Corporate Drive, Suite	230 Burlington, Massachusetts	01803	
Well Number:	RX-H (15')		Depth to Top of Screen:	. 10'	
Date:	12/10/02	$\equiv (NS)$	Depth to Bottom of Screen:	157	,
Location/Site:	Solutia		Depth to Pump Intake:	14 /	
Sampled by:	HAT ICHC	_	Purging Device:	peristaltic	
Project Number:	06626 M35			· ·	
· · · · · · · · · · · · · · · ·		<del></del>	rurging Device:	penstagic	

;	Site Descripi	tion (Weatl	ner, Temp., etc.)	<del>نکان</del>	Sicnny	<del></del>		<del></del>	·	· ·	
TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>i</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature (°C)	Specific Conductivity (µS/cm)'	pH	QRP/Eh³	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
/055					12.98	3.666		-22,/		EK-3	
1100					13.16	3,642	6,20	-15.0	4.74	EK3	
1105					12.87	3,544		-19.2	3.74	ER3	
		}									
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Pump dial settings (hertz, cycles/min, etc.)
 μSiemens per cm (same as μmhos/cm) at 25 °C
 Oxidation reduction potential (stand in for Eh)

Additional Comments:	bearn	ewiac	0730	day	brown	color
	Metz	of Dub	660			

Roux Associates, Inc. 25 Corporate Drive, Suite 230 Burlington, Massachusetts 01803

Depth to Top of Screen: 33'
Depth to Bottom of Screen: 78'
Depth to Pump Intake: 32'
Purging Device: 0 (15)5+24fic

Project Number: 0 6626 M35
Site Description (Weather, Temp., etc.): 303

TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature (0C)	Specific Conductivity (µS/cm)2	рН	(mv) (circle one)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1440				14.08	3.051	6.75	-31.1	3.01	900	
1445				14.06	3.036	6.75	-33.3	2.37	950	
1450				14.01	2.905	6.75	-44.4	7.71	800	
1455				1400	2.782	6.75	<b>-5</b> 3.8	1.07	190	
1500	į			14 03	2.666	6.75	-60.0	0.93	170	
1505				14.00	2.658	6.74	-60.b	1.09	150	
1510				1.96	2.520		-60.5	1.00	145	1
1515				/3.88	2.457	673	-69.0	0.93	139	
							_			
•										

Field Parameter Stabilization							
Turbidity (> 5 NTU, 10% for values > 1 NTU)	Temp. (3%)						
DO (10%)	pH (+/- 0.1 unit)						
Specific Conductance (3%)	ORP/Eh ( +/- 10 millivolts)						

Purge Volumes									
Well Diameter	1	1.5	2	4	6	8			
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2.611			

1	OWE	WOJE	CAMPI	INC	rini i	FORM
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Roux Associates.	Inc.	25 Corporate Drive.	Suite 230	Ruclington	Massachusetts 01803
rioux rissociates,	1114.	TO COLDSTATE DITTE	Chitto The	Darmigton,	MINOSACHUSCIIS DI GOS

Well Number: RX-18 13

Date: I2II3I0ZLocation/Site: So/uHaSampled by: LC/HT

06626m35

Depth to Top of Screen:

Depth to Bottom of Screen:

Depth to Pump Intake:

Purging Device:

Site Description (Weather, Temp., etc.)

Project Number:

40s clardy

TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>t</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature (°C)	Specific Conductivity (pS/cm)'	pH	(mv)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1346					13.36	0,020	6.99	135.0	6.39	ERZ.	
1345		<u> </u>		· · · · · · · · · · · · · · · · · · ·	13.03	0.021	480	139.6	4,27	950	
		-		·							well dry; then purged
1420					11.77	0.02/	6.73		<del></del>	404	black Stuft
1425		 			10.65	4.955	73	-63.6	7,70	395	
1436	<u> </u>		ļ		10.55	4.942	7.14	-68.6	7.39	330	
1435					10.44	4.896	7.16	-68.7	755	340	
1446				 	10.35	4.85-7	7.16		7.71	380	
1445	`	<u></u>	<u> </u>		10.22	4.702	7.16	64.7	7.5%	380	•
1450					10.18	4.772	7.1	1	7.25	380	)
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	<u> </u>		<u></u>	<u> </u>				<u> </u>			
					<u> </u>						
	}							-			

1. Pump dial settings (hertz, c	ycles/min, etc.)
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Additional Comments:	How	not	Stady	beean	Piliac Ca	1230
	14211	OL	riged od	LLI U	7 0	
~		7	0			

<sup>2.</sup> μSiemens per cm (same as μmhos/cm) at 25 °C

<sup>3.</sup> Oxidation reduction potential (stand in for Eh)

						LOW SAMPL		ELD FOR	M				
Loc Sa Projec	I Number: Date: cation/Site: ampled by: ct Number: Site Descript		162 a		Suring	porate Drive, Su		Depth to Tepth to Botto Depth to	op of Screen: om of Screen: om of Screen: Pump Intake: rging Device:	<b>15</b> 20 17:5		pump	
TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature ( <sup>0</sup> C)	Specific Conductivity (AS/cm)	pH (	ORI/Eh³	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)		Comments	
1055					12.54	4,843	6.84	-42.4	2.4)	55			
1100					12.09	6.996		-100,0	0:70	60			
1/05					12.62	7.046	4.73	-134,2	0.72	37			
1110					11.96	7.068	6.74	- 1493	0.82	27			
1115					11.96	7.077	6.74	755,3	0.89	19			
1126					12.00	7.072	6.73	-156.3	0.97	17			
1/25					11.98	7.076	6.73	-162,2		14			··
1130					12.01	7.078	6.74	-16214	1.62	/3			
1135					11.94	7.078	6.71	MILAT.3	1.03	乜	*		
													,
	1	<u> </u>		_	<del> </del>		1	1	- <del></del>	<del>                                     </del>			

t. Pu	nto dial	settings	hertz	CVC	les/min	etc. 1

3	Oxidation	reduction	potential	(stand in	for Eb'
٠,	CARGINOL	100000000	DOTCHHAI	15146161 113	1101 1514

Additional Comments	

Pump dial settings (hertz, cycles/min, etc.)
 μSiemens per cm (same as μmhos/cm) at 25 °C

Roux Associates, Inc. 25 Corporate Drive, Suite 230  Well Number: Date: Date: Location/Site: Sampled by: Project Number: Site Description (Weather, Temp., etc.)  TIME (24-hr)  Depth to Pump Dial!  Purged (mi/min)  Roux Associates, Inc. 25 Corporate Drive, Suite 230  Depth to Top of Screen: Depth to Bottom of Screen: Depth to Pump Intake: Purging Device: Purging Device:  Purging Device:  Turbidity Oxygen (NTt)  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Committee  Comm				M	ELD FOR		LOW SAMPL						
TIME   Depth to   Pump   Purge Rate   Volume   Temperature   Specific   Conductivity   pH   Oxygen   O	Well Number: RX-18 30'  Depth to Top of Screen: 30'  Location/Site: Depth to Bottom of Screen: 25'  Sampled by: LC   MT Depth to Pump Intake: Purging Device: Purging Device: Purging Device: Depth to Pump Intake: Purging Device: Purging De												
	\$	Comments	NTED	Oxygen		рН	Conductivity	Temperature	Volume Purged	Purge Rate	Pump	Depth to Water	TIME
1030 11.58 8.308 7.00 46.8 0.07 941	711			+ <del></del>	46.8	7.00	8.308				<del></del>		(036
	read	too turbid to rea	L	- <del>-</del>				<del></del>					
1040 11.52 8.049 6.81 -55.0 0.49 - W 1045 11.56 8.042 6.82 -59.7 0.46 - W 10.50 11.54 7.995 6.91 -20 9 HMZ 4 47 1100	· ·			0.46	-59.7			l .					

1000		1	(1.00	0.100	6.00	10.1	0.12		TOO TUT DIE TO TEAC	
1040			11.52	8.049	6.81	-55.0	0.49		и	
1045			11.56	8.042	4.82	-59.7	0.46		V1	
1050			11.54	8.042 7.995	6.81	-70.9	H 70.47	1100		
1055		_	11.57	7.975	6.82	-79.2	0.40	1100		
1100			11.57	7.936	681	-80.0	0.37	1100		
1105			11-61	7.890	6.81	-84-2	0.37	1056		
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1.	Pump	dial	settings	(hertz,	cycles/min,	etc.)	
----	------	------	----------	---------	-------------	-------	--

3. Oxidation reduction potential (stand in for Eh)

Additional Comments:	Begin	DW/AC	1017	Sample	0111	
	- <del>U</del>	7- 3-	7	,		

<sup>2.</sup> μSiemens per cm (same as μmhos/cm) at 25 °C

Roux Associates, Inc.	25 Corporate Drive, Suite 230	Burlington, Massachusetts 01803

Well Number:	RX-19 (221)
Date:	12-119-102
Location/Site:	Solutia
Sampled by:	HTILC

Depth to Top of Screen: Depth to Bottom of Screen: Depth to Pump Intake: Purging Device:

Project Number: Ololo 2 lom35

Site Description (Weather, Temp., etc.) 34004, 40

	· · · · · · · · · · · · · · · · · · ·				<u>O.</u>						
TIME (24-hr)	Depth to Water (feet)	Pump Dial <sup>1</sup>	Purge Rate (ml/min)	Volume Purged (liters)	Temperature (°C)	Specific Conductivity (pS/cm)	pH	(mv)	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
1000					11.76	5.146	6.58	6.60	1,76	8.8	
1005					11.76	4.958	6.61	-14.5	1.22	7.2	
1010					11.56	4.615	6.66	53.8	0.98	4.8	
1015					11.57	4.602	4.66	-57.3	0.97	5.6	
1020					11.62	4.548	6.66	-68.0	0.99	516	
1025					11.71	4.527	6.67	1	1.01	4.6	
1030					11.72	4514	6.66	-75.6	1,08	3.9	
1035	•		ļ		11.75	4.49%	6.6	1-81.6	1.10	3.9	
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1	. Pump dia	Lections	Overtz c	veles	(main	etc )
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Additional Comments:	
	-

Pump dial settings (hertz, cycles/min, etc.)
 μSiemens per cm (same as μmhos/cm) at 25 °C

<sup>3.</sup> Oxidation reduction potential (stand in for Eh)

LOW FLOW	SAMPLING	FIELD	FORM
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Roux Associates, Inc. 2	25 Corporate Drive, Suite 230	Burlington, Massachusetts 01803
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 Well Number:
 PX - 19 (36')

 Date:
 12/13/62

 Location/Site:
 Solution

 Sampled by:
 HT/LC

 Project Number:
 06626 M35

Depth to Top of Screen: 30

Depth to Bottom of Screen: 25

Depth to Pump Intake: 24.5

Purging Device: 00151512110

Site Description (Weather, Temp., etc.): 38 Sunny

TIME (24-hr)	Depth to Water (feet)	Purge Rate (ml/min)	Volume Purged (liters or gallons)	Temperature (0C)	Specific Conductivity (µS/cm)2	рН	GRP/Eh (mv) jeirele onej	Dissolved Oxygen (DO) (mg/L)	Turbidity (NTU)	Comments
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			<u> </u>							
								<u> </u>		

Additional Comments: Bearn purge: 1200; tried adding water? Check valving.

Removed HzD added: let recharge. No parameters collected.

Field Parameter Stabilization

Turbidity (> 5 NTU, 10% for values > 1 NTU)

DO (10%)

Specific Conductance (3%)

Field Parameter Stabilization

Temp. (3%)

pH (+/- 0.1 unit)

ORP/Eh (+/- 10 millivolts)

Purge Volumes									
Well Diameter	1	1.5	2	4	6	8			
Gallons Per Foot	0.041	0.09	0.163	0.653	1.469	2.611			

# **ATTACHMENT 3**

Data Validation Memorandum

To:

J Garcia KA Storne cc:

SW Kaczmar

SJ Spiegel

From: Re:

Review of the ISRT Source Area Investigation Conducted

December 2002

File:

10040/32224.001.001

Date:

January 30, 2003

This report addresses a data quality review for soil and water samples, field blank, trip blanks, and field duplicates collected as part of the Industri-Plex Remedial Trust (ISRT) Source Area investigation. Collection activities were conducted by Roux Associates in December 2002.

The sample delivery group, collection date, sample collection identifications, associated laboratory identifications, and analysis requested for this investigation are presented in Table 1-2. Attachment A presents the qualified sample result sheets. Attachment B presents the chain-of-custody forms presented in the data packages.

The following table summarizes the analysis performed for this investigation.

Table 1-1. Analytical methods and references				
Parameter	Method	Reference		
VOCs	USEPA Methods 5030B/8021B	1		
Percent Total Solids	160.3	2		

#### Note:

- United States Environmental Protection Agency (USEPA). 1996. Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW-846), 3<sup>rd</sup> Edition. Washington, D.C., 1986 as updated through December 1996.
- 2 United States Environmental Protection Agency (USEPA). 1983. Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020.

VOCs indicates volatile organic compounds and includes benzene and toluene.

Lancaster Laboratories of Lancaster, Pennsylvania (Lancaster Labs) performed the volatile organic compounds (VOCs) and percent solids analyses. The laboratory data were provided in Contract Laboratory Program (CLP)—like deliverable format. During the validation process, the analytical data were evaluated by O'Brien & Gere Engineers using the quality assurance/quality control (QA/QC) criteria established in the following documents as guidance.

- Blasland, Bouck & Lee. 1999. Quality Assurance Project Plan for the Final Ground-Water/Surface-Water Investigation Plan (GSIP) Scope of Work (SOW) Groundwater and Soil Investigation, Industri-Plex Site Remedial Trust, Woburn, Massachusetts. Syracuse, New York.
- U.S. Environmental Protection Agency (USEPA). 1983. Method for Chemical Analysis of Water and Wastes. Center for Environmental Research Information, Office of Research and Development, Cincinnati, Ohio.
- U.S. Environmental Protection Agency (USEPA). 1996a. Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW-846), 3rd Edition. 1986 as updated through December 1996. Washington, D.C.

Data affected by excursions from the QA/QC criteria were qualified based on guidance provided in the following document and professional judgment:

• U.S. Environmental Protection Agency (USEPA). 1996b. Region 1 USEPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses. Lexington, Massachusetts.

Page 2

Since the USEPA Region I guidelines apply to data generated using CLP methods, the application of these validation guidelines was modified since non-CLP methods were used in the analysis of samples collected for this investigation.

The review included checking the following parameters:

- Chain-of-custody records
- Holding times, sample preservation, sample collection, and percentage solids
- Calibrations
- Blank analysis
- Matrix spike/matrix spike duplicate (MS/MSD) analysis
- Laboratory control sample (LCS) analysis
- Field duplicate analysis
- Surrogate recovery
- Internal standards performance
- Target analyte quantitation, identification, and reported detection limits
- System performance, and
- Documentation completeness.

All samples collected for this investigation were submitted for data validation and are presented in Table 1-2 below.

Sample Delivery Group	Date Collected	Client ID	Laboratory ID	Analysis Requested
SIP 77	12/2/02	RX-2 (2.5-5')	3952446	VOCs, Percent Solids
	ļ	RX-2 (15')	3952447	VOCs
		RX-2 (33')	3952448	VOCs
		TB-120202 (W)	3952449	VOCs
		TB-120202 (S)	3952450	VOCs, Percent Solids
SIP 77	12/3/02	RX-4 (15')	3953597	VOCs
		RX-4 (12.5-15')	3953598	VOCs, Percent Solids
		RX-6 (15')	3953599	VOCs
		RX-6 (12.5-15')	3953600	VOCs, Percent Solids
		RX-4 (29')	3953601	VOCs
		RX-6 (29')	3953602	VOCs
		TB-120302 (W)	3953603	VOCs
	1	TB-120302 (S)	3953604	VOCs, Percent Solids
SIP 78	12/4/02	RX-3 (15')	3954649	VOCs
	•	RX-3 (0-2.5')	3954650	VOCs, Percent Solids
		RX-9 (15')	3954651	VOCs
		RX-9 (7.5-10')	3954652	VOCs, Percent Solids
		RX-3 (23')	3954653	VOCs
		TB-120402 (W)	3954656	VOCs
		TB-120402 (S)	3954657	VOCs, Percent Solids
		RX-9 (15') DUP	3954654	VOCs
		RX-9 (7.5-10') DUP [RX-9 (7.5-10')]	3954655	VOCs, Percent Solids

J Garcia Page 3

Sample	Date	Client ID	Laboratory ID	Analysis Requested
Delivery	Collected	STOTE IS	Landidioi y 15	, and your requested
Group				
SIP 78	12/5/02	RX-1 (15')	<b>39</b> 55391	VOCs
		RX-1 (10-12.5')	<b>395</b> 5390	VOCs, Percent Solids
		RX-5 (15')	<b>3</b> 955392	VOCs
		RX-5 (7.5-10')	<b>39</b> 55393	VOCs, Percent Solids
		RX-9 (33')	3955394	VOCs
		TB-120402 (W)	3955397	VOCs
		TB-120402 (S)	3955398	VOCs, Percent Solids
		RX-5 (29')	3955395	VOCs
		RX-1 (30')	3955396	VOCs
SIP 78	12/6/02	RX-8 (15')	<b>39</b> 56263	VOCs
		RX-8 (7.5-10')	3956264	VOCs, Percent Solids
		RX-8 (31')	3956265	VOCs
		RX-11 (15')	<b>3956</b> 266	VOCs
		RX-11 (7.5-10')	3956267	VOCs, Percent Solids
		RX-11 (31')	3956268	VOCs
		TB-120602 (W)	3956269	VOCs
		TB-120602 (S)	3956270	VOCs, Percent Solids
SIP 79	12/9/02	RX-12 (15')	<b>3957</b> 303	VOCs
		RX-13 (15')	3957304	VOCs
		RX-12 (7.5-10')	3957305	VOCs, Percent Solids
		RX-13 (5-7.5')	3957306	VOCs. Percent Solids
		RX-12 (31')	3957307	VOCs
	,	RX-13 (29')	3957308	VOCs
		TB-120902 (W)	<b>3</b> 957309	VOCs
		TB-120902 (S)	3957310	VOCs, Percent Solids
SIP 80	12/10/02	RX-14 (15')	3958024	VOCs
., .,		RX-14 (0-2.5')	<b>395</b> 8025	VOCs, Percent Solids
		RX-17 (15')	3958026	VOCs
	Ì	RX-17 (5-7.5')	3958027	VOCs, Percent Solids
		RX-14 (29')	3958028	VOCs
		RX-17 (33')	3958029	VOCs
		TB-121002 (W)	3958030	VOCs
		TB-121002 (S)	3958031	VOCs, Percent Solids
		RX-14 (15') DÚP	3958032	VOCs
		[RX-14 (15 <sup>i</sup> )]		
SIP 80	12/11/02	RX-15 (15')	3959403	VOCs
i		RX-15 (7.5-10')	3959404	VOCs, Percent Solids
		RX-16 (15')	3959405	VOCs
		RX-16 (7.5-10')	3959406	VOCs, Percent Solids
		RX-15 (29')	3959408	VOCs
		RX-16 (29')	3959409	VOCs
		TB-121102 (S)	3959411	VOCs, Percent Solids
		TB-121102 (W)	3959410	VOCs
		RX-16 (7.5-10') DUP	3959407	VOCs, Percent Solids
		[RX-16 (7.5-10')]		

J Garcia Page 4

ample elivery roup	Date Collected	Client ID	Laboratory ID	Analysis Requested
P 81	12/12/02	RX-7 (15')	3960338	VOCs
		RX-7 (2.5-5')	<b>3</b> 960339	VOCs, Percent Solids
		RX-10 (15')	3960340	VOCs
		RX-10 (0-2.5')	3960341	VOCs, Percent Solids
		RX-7 (31')	3960342	VOCs
i		RX-10 (25')	3960344	VOCs
		TB-121202 (W)	3960345	VOCs
Ì		TB-121202 (S)	3960346	VOCs, Percent Solids
		RX-7 (31') DUP	3960343	VOCs
		[RX-7 (31')]		
81	12/13/02	RX-18 (30')	3961913	VOCs
		RX-19 (30')	3961914	VOCs
		RX-18 (13')	3961915	VOCs
ļ		RX-18 (13') DUP	3961916	VOCs
!		[RX-18 (13')]		
l		TB-121302 (W)	3961917	VOCs
		TB-121302 (S)	3961918	VOCs, Percent Solids
-		FB-121302-1	<b>3961</b> 919	VOCs
		FB-121302-2	3961920	VOCs
		RX-19 (2.5-5')	3961921	VOCs, Percent Solids
	į	RX-18 (10-15')	<b>396</b> 1922	VOCs, Percent Solids
		RX-8 (5-7.5')*	3961923	VOCs, Percent Solids
32	12/19/02	RX-19 (13')	3967022	VOCs
	ļ	RX-19 (22')	3967023	VOCs
		RX-18 (20')	3967024	VOCs
	i	TB-121902 (W)	3967025	VOCs

Note:

VOCs indicates volatile organic compounds and includes benzene and toluene.

TB indicates trip blank.

FB indicates field blank.

The sample identification in brackets indicates the sample location from which the duplicate sample was collected.

Soil samples were collected using methanol preservation.

Water samples were not preserved upon collection.

\* Indicates that the laboratory noted that the sample vial leaked after sample collection.

The following sections of this memorandum summarize the quality assurance/quality control (QA/QC) parameters and evaluation results.

#### VOLATILE ORGANIC COMPOUND DATA EVALUATION SUMMARY

The following QA/QC parameters were found to meet validation criteria or did not result in additional qualification of sample results:

- Percentage solids
- LCS analysis

- Internal standards performance, and
- System performance

Page 5

Excursions from validation criteria and additional observations are summarized below.

### I. Chain-of-custody records

The chain-of-custody records associated with the collection of samples for this investigation were incomplete since the shipment method was not documented. For each day of sample collection, Lancaster Labs received the samples on the next day.

The chain-of-custody record associated with the samples collected 12/11/02 was incomplete. The name, date, and time that the field individual relinquished the samples to the courier were not documented on the record. The samples were received at the laboratory on 12/12/02.

#### II. Sample collection

Soil samples were collected in pre-weighed vials containing 10 milliliters of methanol. After sample collection, the weight of each sample was determined by Lancaster Labs by weight comparison. One milliliter of the sample methanol extract was added to 25 milliliters of water for the purge and trap analysis process.

#### III. Sample preservation

Water samples were not preserved during sample collection.

The cooler temperature for samples collected 12/19/02 was recorded by Lancaster Labs at 12 °C, which is outside of the acceptable cooler temperature range of  $4 \pm 2$  °C. The laboratory noted that bagged ice was found in the cooler next to the samples. Results for samples shipped in the impacted cooler were qualified as approximate (UJ, J) due to the sample preservation excursion. Samples impacted included: RX-19 (13'), RX-19 (22'), RX-18 (20'), TB-121902 (W).

#### IV. Holding times

Since the water samples were not preserved during sample collection, the holding time that was used to evaluate VOC samples was seven days from collection.

The analysis utilized to report toluene in water sample RX-5 (15') was performed one day outside of the seven day holding time. As a result of the holding time excursion, the result for toluene in sample RX-5 (15') was qualified as approximate (J).

#### V. Surrogate recovery

The recoveries for surrogates in samples analyzed for VOCs were outside of the laboratory control limits. Surrogate recoveries that were outside of control limits and were associated with dilution analyses were not evaluated. The results for target analytes associated with surrogate recoveries greater than the control limits were qualified as approximate (J) to indicate biased high results. The results for target analytes associated with surrogate recoveries less than the control limits were qualified as approximate (J) to indicate biased low results.

The laboratory noted that the vial containing sample RX-18 (5-7.5') leaked after sample collection and methanol was lost. Since the amount of surrogate used to spike samples containing 10 milliliters of methanol was used to analyze the sample, the relative concentration of the surrogate was elevated.

Page 6

The surrogate accuracy excursions are summarized in the following table:

Table 1-3. Surrogate recovery excursions for VOC analyses

Sample ID	Surrogate	Excursion	Affected Analyte	Action
RX-5 (15')	Trifluorotoluene	135 %R	Toluene	J
RX-17 (5-7.5')	Trifluorotoluene	60 %R	Benzene	J
			Toluene	J
RX-18 (5-7.5')	Trifluorotoluene	259 %R	Benzene	J
			Toluene	J

Note:

%R indicates percent recovery.

#### VI. MS/MSD analysis

Matrix spike and matrix spike duplicate samples were not collected as part of the ISRT Source Area investigation. The laboratory performed MS/MSD analyses for each sample delivery group (SDG) in accordance with the internal laboratory quality control policy. The laboratory used non-project samples for the MS/MSDs, unless sufficient sample volume was available for an MS/MSD analysis.

#### VII. Blank analysis

Trip blanks containing methanol were utilized to evaluate contamination introduced during sample collection and shipment of soil samples.

Target analytes were detected in trip blanks associated with samples collected for this investigation. Samples that contained target analytes at less than five times the blank concentration were qualified as undetected (U) due to blank contamination. The blank contamination excursions are summarized in the following table:

Table 1-4. Blank contamination excursions for VOC analyses

Target Analyte	Detected Concentration	Affected Samples	Action and Result
Toluene	3.5 μg/Kg	RX-6 (12.5-15')	1.8 μg/Kg U
Toluene	0.22 μg/L	RX-19 (13') RX-19 (22')	0.57 μg/L U 5.0 μg/L U
-	Toluene	Concentration           Toluene         3.5 μg/Kg	Concentration           Toluene         3.5 μg/Kg         RX-6 (12.5-15')           Toluene         0.22 μg/L         RX-19 (13')

#### VIII. Calibration

The percent drift for analytes in the calibration verification analyzed 12/10/02 was outside of the method criteria of 15 %. The results in samples associated with the calibration verification excursions were qualified as approximate (J) to indicate minor accuracy excursions. The calibration excursions are summarized in the following table:

Table 1-5. Calibration excursions for VOC analyses

Calibration ID	Target Analytes	Excursion	Affected Samples	Action
CCV 12/10/02 @ 0851	Benzene	19 %D	RX-11 (15')	J
HP5890-51			RX-11 (31')	J
CCV 12/10/02 @ 0851	Toluene	17 %D	RX-11 (15')	J
HP5890-51			RX-11 (31')	J
Note:				
%D Indicates percent drift.				

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### IX. Field Duplicate analysis

Field duplicates were collected at a frequency of one per every 10 environmental samples for each type of matrix.

#### X. Target analyte identification and quantitation

The analyses of benzene and toluene were performed using single column gas chromatography with a photoionization detector. Lancaster Labs did not perform a second-column confirmation analyses for the benzene and toluene results reported.

#### XI. Reported detection limits

Dilutions were performed for water and soil environmental samples to maintain the concentration of the target analytes within the calibration range of the instrument.

The laboratory reported the non-detected concentrations using the method detection limit (MDL) values. The qualifier "J" was applied by the laboratory when the analyte concentration was greater than the MDL but less than the limit of quantitation (LOQ) value. This qualifier has been retained during the validation process to indicate that the result is considered to be approximate.

#### XII. Documentation completeness

As previously described, one milliliter of the methanol extract of soil samples was added to 25 milliliters of water for the purge and trap analysis process. However, for soil samples with concentrations that exceeded the upper calibration limit, additional dilutions were performed. The process that is used by the analysts to generate the additional dilution solution, which was used for the analysis, was not documented by the laboratory. Therefore, that dilution calculation could not be evaluated for the impacted soil samples during the validation process.

As the result of a request of the laboratory to investigate the results for samples TB-120402 and RX-4 (12.5-15'), it was determined that the benzene and toluene results for those samples had been switched. The results were corrected through the data validation process and the laboratory submitted corrected sample result sheets.

#### DATA USABILITY

Overall data usability with respect to completeness is 100% for benzene and toluene in the soil and water samples collected as part of the (ISRT) Source Area investigation. Therefore, the completeness objective of 90%, as stated in the QAPP, was met.

### ATTACHMENT A

ISRT Source Area Investigation Conducted December 2002

**Qualified Sample Result Sheets** 



#### ANALYTICAL RESULTS

Prepared for:

Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

314-674-2025

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

#### **SAMPLE GROUP**

The sample group for this submittal is 835642. Samples arrived at the laboratory on Friday, December 20, 2002. The PO# for this group is 2000-08-07.

Client Description	Lancaster Labs Number
RX-19(13') Grab Water Sample	3967022
RX-19(22') Grab Water Sample	3967023
RX-18(20') Grab Water Sample	3967024
TB 121902 Water Sample	3967025

#### **METHODOLOGY**

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

1 COPY TO	Roux Associates	Attn: Mr. Larry McTiernan
1 COPY TO	Data Package Group	



3967022 Lancaster Laboratories Sample No. WW

Collected:12/19/2002 09:40

by LC

Account Number: 10666

Submitted: 12/20/2002 10:20

Reported: 12/23/2002 at 21:49

Discard: 03/24/2003

RX-19(13') Grab Water Sample

Solutia

ISRT-Woburn, MA

R1913 SDG#: SIP82-01

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	3.7	0.20	ug/1	1
00777	Toluene	108-88-3	0.57	0.20	ug/l	1

CAT			_	Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Factor</b>
08213	BTEX (8021)	SW-846 8021B	1	12/23/2002 14:22	Michael F Barrow	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/23/2002 14:22	Michael F Barrow	n.a.



Lancaster Laboratories Sample No.

3967023

Collected:12/19/2002 10:40

by LC

Account Number: 10666

St. Louis MO 63141

Solutia, Inc.

Submitted: 12/20/2002 10:20

Reported: 12/23/2002 at 21:49

Discard: 03/24/2003

-RX-19(22') Grab Water Sample

Solutia

CAT

No.

ISRT-Woburn, MA

R1922 SDG#: SIP82-02

Analysis Name

575 Maryville Centre Drive

As Received Method Dilution Detection Factor Units

BTEX (8021) 08213

00776 Benzene 00777

71-43-2 108-88-3

CAS Number

5.0

As Received

Result

Limit

ug/l ug/l

Due to dilution of the sample made necessary by the high Tevel

of benzene, normal reporting limits were not

attained.

Toluene

Laboratory Chronicle

Dilution CAT Analysis Factor No. Analysis Name Method Trial# Date and Time Analyst 08213 BTEX (8021) SW-846 8021B 12/23/2002 15:07 Michael F Barrow 5 1 01146 GC VOA Water Prep SW-846 5030B 1 12/23/2002 15:07 Michael F Barrow n.a.



Lancaster Laboratories Sample No. WW 3967024

Collected:12/19/2002 11:40

by LC

Account Number: 10666

St. Louis MO 63141

575 Maryville Centre Drive

Solutia, Inc.

Submitted: 12/20/2002 10:20

Reported: 12/23/2002 at 21:49

Discard: 03/24/2003

RX-18(20') Grab Water Sample

Solutia

ISRT-Woburn, MA

R1820 SDG#: SIP82-03

,

As Received

CAT As Received Method Dilution
No. Analysis Name CAS Number Result Detection Units Factor
Limit

08213 BTEX (8021)

00776 Benzene 71-43-2 4,800. 10. ug/l 50 00777 Toluene 108-88-3 110. 10. ug/l 50

Laboratory Chronicle

Dilution CAT Analysis Analysis Name Analyst **Pactor** No. Trial# Date and Time Method SW-846 8021B 12/23/2002 15:51 Michael F Barrow 50 08213 BTEX (8021) 1 SW-846 5030B GC VOA Water Prep Michael P Barrow 01146 12/23/2002 15:51 n.a.



Lancaster Laboratories Sample No. WW 3967025

Collected:12/19/2002 00:00

Submitted: 12/20/2002 10:20 Reported: 12/23/2002 at 21:50

Discard: 03/24/2003 TB 121902 Water Sample

Solutia

ISRT-Woburn, MA

ST122 SDG#: SIP82-04TB

Account Number: 10666

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776 00777	Benzene Toluene	71-43-2 108-88-3	N.D. (1)	0.20 0.20	ug/l ug/l	1

Laboratory Chronicle Dilution CAT Analysis Method Trial: **Factor** Date and Time Analyst No. Analysis Name Michael F Barrow 1 SW-846 8021B 12/23/2002 13:10 08213 BTEX (8021) 1 GC VOA Water Prep SW-846 5030B 12/23/2002 13:10 Michael F Barrow n.a. 01146

ACIL



#### ANALYTICAL RESULTS

Prepared for:

Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

314-674-2025

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

#### SAMPLE GROUP

The sample group for this submittal is 834508. Samples arrived at the laboratory on Friday, December 13, 2002. The PO# for this group is 2000-08-07.

Client Description	Lancaster Labs Number
RX-7 (15') Grab Water Sample	3960338
RX-7 (2.5-5') Grab Soil Sample	3960339
RX-10 (15') Grab Water Sample	3960340
RX-10 (0.2.5') Grab Soil Sample	3960341
RX-7 (31') Grab Water Sample	3960342
RX-7 (31') DUP Grab Water Sample	3960343
RX-10 (25') Grab Water Sample	3960344
TB121202 Water Sample	3960345
TB121202 Methanol Sample	3960346

#### **METHODOLOGY**

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

1 COPY TO	Roux, Inc.	Attn: Mr. Larry McTiernan
1 COPY TO	Solutia, Inc.	Attn: Mr. Jorge Garcia
1 COPY TO	Data Package Group	- <i>;</i>



## **Analysis Report**



Questions? Contact your Client Services Representative Barbara A Weyandt at (717) 656-2300.

Respectfully Submitted,

Erik J. Frederiksen
Group Leader



Lancaster Laboratories Sample No. WW 3960338

Collected:12/12/2002 09:50 by HT Account Number: 10666

Submitted: 12/13/2002 09:10 Solutia, Inc.

Reported: 12/18/2002 at 21:23 575 Maryville Centre Drive

Discard: 03/19/2003 St. Louis MO 63141

RX-7 (15') Grab Water Sample

Solutia

ISRT - Woburn, MA

RX715 SDG#: SIP81-01

CAT			As Received	As Received Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	2,500.	2.0	ug/l	10
00777	Toluene	108-88-3	230.	2.0	ug/1	10
	Sufficient sample volume was no	t available to	perform a MSD f	or this		
	analysis. However, a MS was per performed to demonstrate precis					

CAT			-	Dilution			
No.	Analysis Name	Method		Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846	8021B	1	12/17/2002 13:42	Melissa D Mann	10
01146	GC VOA Water Prep	SW-846	5030B	1	12/17/2002 13:42	Melissa D Mann	n.a.



Lancaster Laboratories Sample No. SW 3960339

Collected:12/12/2002 12:15

by HT

Account Number: 10666

Submitted: 12/13/2002 09:10

Reported: 12/18/2002 at 21:24

Discard: 03/19/2003

RX-7 (2.5-5') Grab Soil Sample

Solutia

ISRT - Woburn, MA

RX755 SDG#: SIP81-02

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

4			Dry		
		Dry	Method		Dilution
Analysis Name	CAS Number	Result	Detection Limit	Unita	<b>Pactor</b>
Moisture	n.a.	9.62	0.50	*	1
-	_	-			
BTEX (Total Xylenes)					
Benzene	71-43-2	4.7	1.4	ug/kg	15.5
Toluene	108-88-3	N.D.	1.4	ug/kg	15.5
in methanol. The reporting l Sufficient sample volume was	limits were adjus	ted appropria	/MSD for this		
	Moisture  "Moisture" represents the local 103 - 105 degrees Celsius. The as-received basis.  BTEX (Total Xylenes)  Benzene Toluene The analysis for volatiles with methanol. The reporting in methanol was	Moisture n.a.  "Moisture" represents the loss in weight of to 103 - 105 degrees Celsius. The moisture result as-received basis.  BTEX (Total Xylenes)  Benzene 71-43-2  Toluene 108-88-3  The analysis for volatiles was performed on a in methanol. The reporting limits were adjust Sufficient sample volume was not available to	Analysis Name  CAS Number  Result  Moisture  n.a.  9.62  "Moisture" represents the loss in weight of the sample aft  103 - 105 degrees Celsius. The moisture result reported ab  as-received basis.  BTEX (Total Xylenes)  Benzene  71-43-2  4.7  Toluene  108-88-3  N.D.  The analysis for volatiles was performed on a sample which in methanol. The reporting limits were adjusted appropria  Sufficient sample volume was not available to perform a MS	Analysis Name  CAS Number  Result  Detection Limit  Moisture  n.a.  9.62  0.50  "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.  BTEX (Total Xylenes)  Benzene  71-43-2  4.7  1.4	Analysis Name  CAS Number Result Detection Limit Moisture n.a. 9.62 0.50 *Moisture* represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.  BTEX (Total Xylenes)  Benzene 71-43-2 4.7 1.4 ug/kg Toluene 108-88-3 N.D. 1.4 ug/kg The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.  Sufficient sample volume was not available to perform a MS/MSD for this

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

methanol in the field.

accuracy at a batch level.

Laboratory Chronicle

	CAT			•	Dilution		
	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Factor</b>
-	00111	Moisture	EPA 160.3 modified	1	12/14/2002 03:40	Mildred E Zimmerman	1
	08180	BTEX (Total Xylenes)	SW-846 8021B	1	12/16/2002 16:03	Stephanie A Selis	15.5

0 1 0



Lancaster Laboratories Sample No. 3960340

Collected:12/12/2002 10:05

by HT

Account Number: 10666

575 Maryville Centre Drive

Submitted: 12/13/2002 09:10

Reported: 12/18/2002 at 21:24

Discard: 03/19/2003

RX-10 (15') Grab Water Sample

Solutia

CAT

No.

ISRT - Woburn, MA

X1015 SDG#: SIP81-03

Analysis Name

St. Louis MO 63141

Solutia, Inc.

As Received

Dilution As Received Method Detection **Factor** Result Units Limit

BTEX (8021) 08213

00776 Benzene 00777 Toluene 71-43-2 108-88-3

CAS Number

12,000 19.

10. 10. ug/1

50

50 ug/l

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

The reporting limits were raised because sample dilution was necessary to bring target compounds into the calibration range of the system.

Laboratory Chronicle

CAT Analysis Dilution Factor Trial# No. Analysis Name Nethod Date and Time Analyst 08213 BTEX (8021) SW-846 8021B 12/17/2002 00:43 Martha L Seidel 50 01146 GC VOA Water Prep SW-846 5030B 1 12/17/2002 00:43 Martha L Seidel n.a.



Lancaster Laboratories Sample No. SW 3960341

Collected:12/12/2002 12:15

by HT

Account Number: 10666

Submitted: 12/13/2002 09:10

Reported: 12/18/2002 at 21:24

Discard: 03/19/2003

RX-10 (0.2.5') Grab Soil Sample

Solutia

ISRT - Woburn, MA

RX100 SDG#: SIP81-04

Solutia, Inc. 575 Maryville

575 Maryville Centre Drive

St. Louis MO 63141

Dry

				1		
CAT			Dry	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
00111	Moisture	n.a.	6.55	0.50	*	1
08180	"Moisture" represents the loss 103 - 105 degrees Celsius. The as-received basis. BTEX (Total Xylenes)					
08183	Benzene	71-43-2	23.	1.3	ug/kg	14.8
08184	Toluene	108-88-3	36.	1.3	ug/kg	14.8
	The analysis for volatiles was in methanol. The reporting li					

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

methanol in the field.

	CAT		_		Analysis		Dilution
-	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Factor</b>
	00111	Moisture	EPA 160.3 modified	1	12/14/2002 03:40	Mildred E Zimmerman	1
	08180	BTEX (Total Xylenes)	SW-846 8021B	1	12/16/2002 16:41	Stephanie A Selis	14.8



Lancaster Laboratories Sample No. WW 3960342

Collected:12/12/2002 14:05

by HT

Account Number: 10666

Submitted: 12/13/2002 09:10

Reported: 12/18/2002 at 21:24

Discard: 03/19/2003

RX-7 (31') Grab Water Sample

Solutia

ISRT - Woburn, MA

RX731 SDG#: SIP81-05

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	4,300.	4.0	ug/l	20
00777	Toluene	108-88-3	820.	4.0	ug/l	20
	Sufficient sample volume was no analysis. However, a MS was per performed to demonstrate precis	formed. In add	lition, a LCS/LCS	D was		

		2020202	-,			
CAT				Dilution		
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Pactor</b>
08213	BTEX (8021)	SW-846 8021B	1	12/17/2002 01:16	Martha L Seidel	20
01146	GC VOA Water Prep	SW-846 5030B	1	12/17/2002 01:16	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. WW 3960343

Collected:12/12/2002 14:05

by HT

Account Number: 10666

Submitted: 12/13/2002 09:10

Reported: 12/18/2002 at 21:24

Discard: 03/19/2003

RX-7 (31') DUP Grab Water Sample

Solutia

ISRT - Woburn, MA

RX73D SDG#: SIP81-06

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	4,300.	4.0	ug/1	20
00777	Toluene	108-88-3	820.	4.0	ug/l	20
	Sufficient sample volume was no analysis. However, a MS was per performed to demonstrate precis	formed. In add	lition, a LCS/LCS	D was		

			Habbiacory	CILL C.	111010		
CAT				Dilution			
	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Factor</b>
_	08213	BTEX (8021)	SW-846 8021B	1	12/17/2002 01:48	Martha L Seidel	20
	01146	GC VOA Water Prep	SW-846 5030B	1	12/17/2002 01:48	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. WW 3960344

Collected: 12/12/2002 12:45

by HT

Account Number: 10666

Submitted: 12/13/2002 09:10

Reported: 12/18/2002 at 21:24

Discard: 03/19/2003

RX-10 (25') Grab Water Sample

Solutia

ISRT - Woburn, MA

RX125 SDG#: SIP81-07

Solutia, Inc. 575 Maryville Centre Drive

St. Louis MO 63141

CAT			As Received	As Received Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	<b>Factor</b>
08213	BTEX (8021)					
00776	Benzene	71-43-2	13,000.	10.	ug/l	50
00777	Toluene	108-88-3	1,700.	10.	ug/l	50
	Sufficient sample volume was no	t available to	perform a MSD f	or this		
	analysis. However, a MS was per	formed. In add	lition, a LCS/LCS	D was		
	performed to demonstrate precis	ion and accura	i <mark>cy at a</mark> batch le	vel.		

CAT			4	Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Factor</b>
08213	BTEX (8021)	SW-846 8021B	1	12/17/2002 02:21	Martha L Seidel	50
01146	GC VOA Water Prep	SW-846 5030B	1	12/17/2002 02:21	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. WW 3960345

Collected: n.a.

by HT

Account Number: 10666

Submitted: 12/13/2002 09:10

Reported: 12/18/2002 at 21:24

Discard: 03/19/2003 TB121202 Water Sample

Solutia

ISRT - Woburn, MA

TB202 SDG#: SIP81-08TB

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
	Sufficient sample volume was no analysis. However, a MS was per performed to demonstrate precis	formed. In add	ition, a LCS/LCS	D was		

CAT	Analysis					Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/16/2002 22:00	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/16/2002 22:00	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. G5 3960346

Collected: n.a.

by HT

Account Number: 10666

St. Louis MO 63141

575 Maryville Centre Drive

Solutia, Inc.

Submitted: 12/13/2002 09:10

Reported: 12/18/2002 at 21:24

Discard: 03/19/2003

TB121202 Methanol Sample

Solutia

ISRT - Woburn, MA

TB121 SDG#: SIP81-09TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08180	BTEX (Total Xylenes)					
08183	Benzene	71-43-2	N.D.	2.0	ug/kg	25
08184	Toluene	108-88-3	N.D.	2.0	ug/kg	25
	The analysis for volatiles win methanol. The reporting	vas performed on a limits were adjus				

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

Laboratory Chronicle

CAT Analysis Name Method Trial Date and Time Analyst Stephanie A Selis 25



#### ANALYTICAL RESULTS

Prepared for:

Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

314-674-2025

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

#### SAMPLE GROUP

The sample group for this submittal is 834700. Samples arrived at the laboratory on Saturday, December 14, 2002. The PO# for this group is 2000-08-07.

Client Description	Lancaster Labs Number
RX-18(30') Grab Water Sample	3961913
RX-19(30') Grab Water Sample	3961914
RX-18(13') Grab Water Sample	39 <b>61915</b>
RX-18(13')DUP Grab Water Sample	3961 <b>9</b> 16
TB121302 Water Sample	3961917
TB121302 Methanol Sample	3961918
FB121302 Grab Water Sample	3961919
FB121302 Water Grab Water Sample	3961920
RX-19 (2.5-5') Grab Soil Sample	3961921
RX-18 (10-15') Grab Soil Sample	3 <b>961922</b>
RX-18 (5-7.5') Grab Soil Sample	3961 <b>923</b>

#### **METHODOLOGY**

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

1 COPY TO	Roux, Inc.	•	Attn: Mr. Larry McTiernan
1 COPY TO	Solutia, Inc.		Attn: Mr. Jorge Garcia
1 COPY TO	Data Package Group		



v018

# **Analysis Report**



Questions? Contact your Client Services Representative Barbara A Weyandt at (717) 656-2300.

Respectfully Submitted,

Steven A. Skiles St. Chemist



# REPRINT

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Lancaster Laboratories Sample No. WW 3961913

Collected:12/13/2002 11:10

by HT

Account Number: 10666

Submitted: 12/14/2002 10:40

Reported: 12/30/2002 at 17:31

Discard: 03/31/2003

RX-18(30') Grab Water Sample

Solutia

ISRT - Woburn, MA

X1830 SDG#: SIP81-10 Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	170.	1.0	ug/l	5
00777	Toluene	108-88-3	25.	1.0	ug/l	5
	Sufficient sample volume was no	t available to	perform a MSD f	or this		
	analysis. However, a MS was per	formed. In add	ition, a LCS/LCS	D was		
	performed to demonstrate precis	ion and accura	<b>cy at a</b> batch le	vel.		

CAT	CAT Analysis					Dilution
No.	Analysis Name	<b>Method</b>	Trial#	Date and Time	Analyst	<b>Factor</b>
08213	BTEX (8021)	SW-846 8021B	1	12/17/2002 21:32	Martha L Seidel	5
01146	GC VOA Water Prep	SW-846 5030B	1	12/17/2002 21:32	Martha L Seidel	n.a.

## **Analysis Report**



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3961914 Lancaster Laboratories Sample No. WW

Collected:12/13/2002 14:05

by HT

Account Number: 10666

Submitted: 12/14/2002 10:40

Reported: 12/30/2002 at 17:31

Discard: 03/31/2003

RX-19(30') Grab Water Sample

Solutia

ISRT - Woburn, MA

X1930. SDG#: SIP81-11 Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	<b>As</b> Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	51.	0.20	ug/l	ı
00777	Toluene	108-88-3	25.	0.20	ug/l	1
	Sufficient sample volume was no analysis. However, a MS was per performed to demonstrate precis	formed. In add	lition, a LCS/LCS	D was		

CAT		Analysis			Dilution	
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/18/2002 01:55	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/18/2002 01:55	Martha L Seidel	n.a.



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Lancaster Laboratories Sample No. 3961915

Collected:12/13/2002 14:50

by HT

Account Number: 10666

Submitted: 12/14/2002 10:40

Reported: 12/30/2002 at 17:32

Discard: 03/31/2003

RX-18(13') Grab Water Sample

Solutia

ISRT - Woburn, MA

X1813 SDG#: SIP81-12

Solutia, Inc. 575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	3,900.	2.0	ug/l	10
00777	Toluene	108-88-3	160.	2.0	ug/l	10
	Sufficient sample volume was no analysis. However, a MS was per performed to demonstrate precis	formed. In add	ition, a LCS/LCS	) was		

CAT			_	Dilution		
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/18/2002 02:28	Martha L Seidel	10
01146	GC VOA Water Prep	SW-846 5030B	1	12/18/2002 02:28	Martha L Seidel	n.a.

## **Analysis Report**



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Lancaster Laboratories Sample No. WW 3961916

Collected:12/13/2002 14:50

by HT

Account Number: 10666

Submitted: 12/14/2002 10:40

Reported: 12/30/2002 at 17:32

Discard: 03/31/2003

RX-18(13')DUP Grab Water Sample

Solutia

ISRT - Woburn, MA

1813D SDG#: SIP81-13FD

Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor			
08213	BTEX (8021)								
00776	Benzene	71-43-2	4,100.	4.0	ug/l	20			
00777	Toluene	108-88-3	.170.	2.0	ug/1	10			
	Sufficient sample volume was no	t available to	perform a MSD f	or this					
	analysis. However, a MS was performed. In addition, a LCS/LCSD was								
	performed to demonstrate precision and accuracy at a batch level.								

CAT			-	Dilution		
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/18/2002 03:00	Martha L Seidel	10
08213	BTEX (8021)	SW-846 8021B	1	12/18/2002 12:29	Melissa D Mann	20
01146	GC VOA Water Prep	SW-846 5030B	1	12/18/2002 03:00	Martha L Seidel	n.a.



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Lancaster Laboratories Sample No. WW 3961917

Collected:12/13/2002 00:00

Account Number: 10666

Submitted: 12/14/2002 10:40

Solutia, Inc. Reported: 12/30/2002 at 17:32 575 Maryville Centre Drive

Discard: 03/31/2003 TB121302 Water Sample St. Louis MO 63141

Solutia

ISRT - Woburn, MA

SDG#: SIP81-14TB TB13W

CAT			As Received	As Received Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
	Sufficient sample volume was no analysis. However, a MS was per performed to demonstrate precis	formed. In add	lition, a LCS/LCS	D was		

				- 2			
CAT				Analysis			
	No.	Analysis Name	Method	Trial# Date and Time	Analyst	Factor	
-	08213	BTEX (8021)	SW-846 8021B	1 12/18/2002 14:39	Melissa D Mann	1	
	01146	GC VOA Water Prep	SW-846 5030B	1 12/18/2002 14:39	Melissa D Mann	n.a.	



Lancaster Laboratories Sample No. 3961918

Collected:12/13/2002 00:00

Account Number: 10666

Submitted: 12/14/2002 10:40

Solutia, Inc.

Reported: 12/30/2002 at 17:32 Discard: 03/31/2003

575 Maryville Centre Drive

TB121302 Methanol Sample

St. Louis MO 63141

Solutia

CAT No.

ISRT - Woburn, MA

TB13M SDG#: SIP81-15TB

As Received

	As Received	Method		Dilution
CAS Number	Result	Detection Limit	Units	Factor

BTEX (Total Xylenes) 08180

Analysis Name

25 N.D. 2.0 ug/kg 08183 71-43-2 Benzene ug/kg 25 N.D. 2.0 08184 Toluene 108-88-3

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a  ${\tt MS/MSD}$  for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

methanol in the field.

Laboratory Chronicle

Dilution CAT Analysis Trial# Date and Time Analyst **Factor** Method No. Analysis Name SW-846 8021B 12/18/2002 23:43 Deborah S Garrison 25 08180 BTEX (Total Xylenes)



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Lancaster Laboratories Sample No. WW 3961919

Collected:12/13/2002 00:00

by HT

Account Number: 10666

Submitted: 12/14/2002 10:40

Reported: 12/30/2002 at 17:32

Discard: 03/31/2003

FB121302 Grab Water Sample

Solutia

ISRT - Woburn, MA

FB13- SDG#: SIP81-16FB

Solutia, Inc. 575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor		
08213	BTEX (8021)							
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1		
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1		
	Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.							

		Laborato	. J C112 C	111010		
CAT	CAT					Dilution
No.	Analysis Name	Kethod	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/18/2002 15:12	Melissa D Mann	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/18/2002 15:12	Melissa D Mann	n.ā.





Lancaster Laboratories Sample No. WW 3961920

Collected:12/13/2002 00:00

by HT

Account Number: 10666

Submitted: 12/14/2002 10:40

Reported: 12/30/2002 at 17:32

Discard: 03/31/2003

FB121302 Water Grab Water Sample

Solutia

ISRT - Woburn, MA

FB13W SDG#: SIP01-17FB

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor		
08213	BTEX (8021)							
00776	Benzene	71-43-2	N.D.	0.20	ug/1	1		
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1		
	Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.							

CAT			Analysi	Dilution		
No.	Analysis Name	Method	Trial# Date and	Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1 12/18/2002	15:45	Melissa D Mann	1
01146	GC VOA Water Prep	SW-846 5030B	1 12/18/2002	15:45	Melissa D Mann	n.a.



Lancaster Laboratories Sample No. 3961921

Collected:12/13/2002 13:00

by HT

Account Number: 10666

575 Maryville Centre Drive

Solutia, Inc.

Submitted: 12/14/2002 10:40

Reported: 12/30/2002 at 17:32

Discard: 03/31/2003

RX-19 (2.5-5') Grab Soil Sample

Solutia

CAT

No.

ISRT - Woburn, MA

X192-SDG#: SIP81-18

Analysis Name

St. Louis MO 63141

Dry Method Detection Units

Dilution **Pactor** 

00111 Moisture

CAS Number Result

Limit

12/19/2002 16:06

1

6.37

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an

as-received basis.

08180 BTEX (Total Xylenes)

08183 08184

08180

Benzene Toluene

71-43-2

12.

1.3

·ug/kg ug/kg 15 15

108-88-3 1.3 The analysis for volatiles was performed on a sample which was preserved

in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and

accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

methanol in the field.

Laboratory Chronicle

1

CAT Analysis No. Analysis Name Method Trial# Date and Time 12/17/2002 08:05 00111 Moisture EPA 160.3 modified 1 BTEX (Total Xylenes) SW-846 8021B

Analyst

Helen L Schaeffer Deborah S Garrison Factor 1 15

Dilution



3961922 Lancaster Laboratories Sample No.

Collected: 12/13/2002 15:30

by HT

Account Number: 10666

Submitted: 12/14/2002 10:40

Reported: 12/20/2002 at 08:03

Discard: 03/21/2003

RX-18 (10-15') Grab Soil Sample

Solutia

ISRT - Woburn, MA

SDG#: SIP81-19 X1810.

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

Dry Dilution Method CAT Dry Factor No. Analysis Name CAS Number Result Detection Units Limit 00111 Moisture 38.2 0.50 n.a.

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an

as-received basis.

08180 BTEX (Total Xylenes)

2646 08183 71-43-2 210,000. 340. ug/kg Benzene 2646 108-88-3 16,000. 340. ug/kg 08184

The analysis for volatiles was performed on a sample which was preserved

in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and

accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

methanol in the field.

Laboratory Chronicle

Dilution CAT Analysis **Factor** Trial# Date and Time Analyst No. Analysis Name Method EPA 160.3 modified 12/17/2002 08:05 Helen L Schaeffer 1 00111 1 Moisture 12/19/2002 01:37 Deborah S Garrison 2646 08180 BTEX (Total Xylenes) SW-846 8021B 1



Lancaster Laboratories Sample No. 3961923

Collected:12/13/2002 16:00

by LC

Account Number: 10666

St. Louis MO 63141

575 Maryville Centre Drive

Solutia, Inc.

Submitted: 12/14/2002 10:40

Reported: 12/30/2002 at 17:33

Discard: 03/31/2003

RX-18 (5-7.5') Grab Soil Sample

Solutia

CAT

No.

ISRT - Woburn, MA

X85--SDG#: SIP81-20

Analysis Name CAS Number 00111 Moisture 11.0

Drv Method Dilution Detection Units **Factor** Limit 0.50

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

08180 BTEX (Total Xylenes)

08183 Benzene 71-43-2 ug/kg 20 2.2 ug/kg 20 08184 108-88-3

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

The surrogate recovery is above the range of specifications because the methanol leaked out of the vial prior to being spiked. There is not enough sample to repeat for confirmation.

The results are estimated because the methanol leaked out of the vial.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

Laboratory Chronicle

Dilution CAT Analysis **Factor** No. Analysis Name Method Trial# Date and Time Analyst EPA 160.3 modified 1 12/17/2002 08:05 Helen L Schaeffer 1 00111 Moisture SW-846 8021B -1 12/19/2002 00:59 Deborah S Garrison 20 BTEX (Total Xylenes) 08180



# ANALYTICAL RESULTS

Prepared for:

Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

314-674-2025

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

### **SAMPLE GROUP**

The sample group for this submittal is 834079. Samples arrived at the laboratory on Wednesday, December 11, 2002. The PO# for this group is 2000-08-07.

Client Description	Lancaster Labs Number
RX-14(15') Grab Water Sample	3958024
RX-14(0-2.5') Grab Soil Sample	3958025
RX-17(15') Grab Water Sample	3958026
RX-17(5-7.5') Grab Soil Sample	3958027
RX-14(29') Grab Water Sample	3958028
RX-17(33') Grab Water Sample	3958029
TB121002 Water Sample	3958030
TB121002 Methanol Sample	3958031
RX-14(15')DUP Grab Water Sample	3958032

#### **METHODOLOGY**

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

1 COPY TO	Roux, Inc.	Attn: Mr. Larry McTiernan
1 COPY TO	Solutia, Inc.	Attn: Mr. Jorge Garcia
1 COPY TO	Data Package Group	



# Analysis Report



Questions? Contact your Client Services Representative Barbara A Weyandt at (717) 656-2300.

Respectfully Submitted,

Steven A. Skiles Sr. Chemist







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Lancaster Laboratories Sample No. WW 3958024

Collected:12/10/2002 10:40

by HAT

Account Number: 10666

Submitted: 12/11/2002 11:55

Reported: 12/17/2002 at 08:11

Discard: 03/18/2003

RX-14(15') Grab Water Sample

Solutia

ISRT - Woburn, MA

R1415 SDG#: SIP80-01

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

As Received

CAT No.	Analysis Name	CAS Number	As Received Result	Method Detection Limit	Units	Dilution Factor	
08213	BTEX (8021)						
00776	Benzene	71-43-2	180.	0.20	ug/l	1	
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1	
	Sufficient sample volume was not available to perform a MSD for this						
	analysis. However, a MS was performed. In addition, a LCS/LCSD was						
	performed to demonstrate precis:	ion and accura	<b>cy</b> at a batch lev	rel.			

CAT			-	Dilution		
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Factor</b>
08213	BTEX (8021)	SW-846 8021B	1	12/12/2002 22:00	Melissa D Mann	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/12/2002 22:00	Melissa D Mann	n.a.



Lancaster Laboratories Sample No. SW 3958025

Collected:12/10/2002 11:15

by HAT

Account Number: 10666

St. Louis MO 63141

575 Maryville Centre Drive

Solutia, Inc.

Submitted: 12/11/2002 11:55

Reported: 12/17/2002 at 08:11

Discard: 03/18/2003

RX-14(0-2.5') Grab Soil Sample

Solutia

ISRT - Woburn, MA

14025 SI

CAT

No.

SDG#: SIP80-02

Dry

Method Dilution
Detection Units Factor

00111 Moisture

CAS Number

Result

Dry

Limit 0.50

4

. 4000

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an

as-received basis.

08180 BTEX (Total Xylenes)

Analysis Name

08183 Benzene

Toluene

08184

71-43-2 108-88-3 N.D.

1.8

1.5

ug/kg

ug/kg

16.5 16.5

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

Laboratory Chronicle

Analysis Dilution CAT Trial# Factor Date and Time Analyst No. Analysis Name Method EPA 160.3 modified 12/12/2002 08:39 Helen L Schaeffer 1 00111 Moisture 1 16.5 SW-846 8021B 1 12/16/2002 14:09 Stephanie A Selis 08180 BTEX (Total Xylenes)

0 G 1 G



Lancaster Laboratories Sample No. WW 3958026

Collected:12/10/2002 11:10

by HAT

Account Number: 10666

St. Louis MO 63141

575 Maryville Centre Drive

Submitted: 12/11/2002 11:55

Reported: 12/17/2002 at 08:11

Discard: 03/18/2003

RX-17(15') Grab Water Sample

Solutia

CAT

No.

ISRT - Woburn, MA

R1715 SDG#: SIP80-03

Analysis Name

Solutia, Inc.

As Received

s Received Method

Limit

ived Method Dilution
Detection Units Factor

08213 BTEX (8021)

00776 Benzene 00777 Toluene 71-43-2

CAS Number

69,000.

Result

40. 20. ug/l ug/l 200 100

Toluene 108-88-3 97.
Sufficient sample volume was not available to perform

Sufficient sample volume was not available to perform SDD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Due to dilution of the sample made necessary by the high level of benzene, normal reporting limits were not attained for toluene.

				***		
CAT			Analysis			Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/12/2002 22:33	Melissa D Mann	200
08213	BTEX (8021)	SW-846 8021B	1	12/12/2002 23:05	Melissa D Mann	100
01146	GC VOA Water Prep	SW-846 5030B	1	12/12/2002 22:33	Melissa D Mann	n.a.



Lancaster Laboratories Sample No. 3958027 SW

Collected:12/10/2002 11:20

by HAT

Account Number: 10666

Submitted: 12/11/2002 11:55

Reported: 12/17/2002 at 08:11

Discard: 03/18/2003

RX-17(5-7.5') Grab Soil Sample

Solutia

ISRT - Woburn, MA

17575 SDG#: SIP80-04 Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

Dry

Method

Dilution

Moisture

CAS Number

Result

Detection Limit

**Pactor** 

00111

08184

CAT

No.

50.0

Dry

0.50

1

"Moisture" represents the loss in weight of the sample after oven drying at

103 - 105 degrees Celsius. The moisture result reported above is on an

as-received basis.

08180 BTEX (Total Xylenes)

Analysis Name

08183 Benzene 71-43-2

ug/kg

ug/kg

Units

15.8 15.8

Toluene 108-88-3 2.5 The analysis for volatiles was performed on a sample which was preserved

in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and

accuracy at a batch level.

A poor surrogate recovery was observed. The analysis was repeated and a poor surrogate recovery was again observed indicating a significant matrix

effect.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

methanol in the field.

Laboratory Chronicle

1

1

CAT No.

00111

08180

Analysis Name

Moisture BTEX (Total Xylenes) Method EPA 160.3 modified SW-846 8021B

Trial# Date and Time 12/12/2002 08:39 12/16/2002 14:47

Analysis

Helen L Schaeffer Stephanie A Selis Factor 15.8

Dilution

MEMBER

Lancaster Laboratories, Inc. 2425 New Holland Pike PO Box 12425 Lancaster, PA 17605-2425 717-656-2300 Fax: 717-656-2681 Analyst



Lancaster Laboratories Sample No. WW 3958028

Collected:12/10/2002 14:00

by HAT

Account Number: 10666

St. Louis MO 63141

575 Maryville Centre Drive

Solutia, Inc.

Submitted: 12/11/2002 11:55

Reported: 12/17/2002 at 08:11

Discard: 03/18/2003

RX-14(29') Grab Water Sample

Solutia

ISRT - Woburn, MA

R1429

CAT

Nφ.

SDG#: SIP80-05

Analysis Name

As Received

Limit

Method Dilution
Detection Units Factor

08213 BTEX (8021)

00776 Benzene 00777 Toluene 71-43-2 108-88-3

CAS Number

17. J

Result

0.20 0.20 ug/l ug/l

'1

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

CAT			Analysis			Dilution	
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor	
08213	BTEX (8021)	SW-846 8021B	1	12/12/2002 10:43	Melissa D Mann	1	
01146	GC VOA Water Prep	SW-846 5030B	1	12/12/2002 10:43	Melissa D Mann	n.a.	



Lancaster Laboratories Sample No. 3958029

Collected:12/10/2002 15:20

by HAT

CAS Number

71-43-2

108-88-3

Account Number: 10666

St. Louis MO 63141

0.20

575 Maryville Centre Drive

Solutia, Inc.

Submitted: 12/11/2002 11:55

Reported: 12/17/2002 at 08:12

Discard: 03/18/2003

RX-17(33') Grab Water Sample

Analysis Name

BTEX (8021)

Solutia

ISRT - Woburn, MA

R1733

CAT

No.

08213

00776 Benzene

00777 Toluene

SDG#: SIP80-06

As Received Result	As Received Method Detection Limit	Units	Dilution Factor
37.	0.20	ug/l	1

ug/1

# Laboratory Chronicle

CAT				Dilution		
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/13/2002 14:03	Melissa D Mann	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/13/2002 14:03	Melissa D Mann	n.a.



Lancaster Laboratories Sample No. WW 3958030

Collected:12/10/2002 00:00

Account Number: 10666

Submitted: 12/11/2002 11:55 Reported: 12/17/2002 at 08:12 Solutia, Inc. 575 Maryville Centre Drive

Discard: 03/18/2003 TB121002 Water Sample St. Louis MO 63141

Solutia

ISRT - Woburn, MA

TBW10 SDG#: SIP80-07TB

CAT	Dilution
No	Units Factor
08213	
00776	ug/1 1
00777	ug/1 1
00777	ug/l

CAT			Analysis			Dilution
No.	Analysis Name	Mathod	Trial# Date and	Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1 12/13/200	2 11:20	Melissa D Mann	1
01146	GC VOA Water Prep	SW-846 5030B	1 12/13/200	2 11:20	Melissa D Mann	n.a.



Lancaster Laboratories Sample No. G5 3958031

Collected:12/10/2002 00:00

Submitted: 12/11/2002 11:55

Reported: 12/17/2002 at 08:12

methanol in the field.

Discard: 03/18/2003

TB121002 Methanol Sample

Solutia

ISRT - Woburn, MA

TBM10 SDG#: SIP80-08TB

Account Number: 10666

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

				As Received		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Unita	Factor
08180	BTEX (Total Xylenes)					
08183	Benzene	71-43-2	N.D.	2.0	ug/kg	25
08184	Toluene	108-88-3	N.D.	2.0	ug/kg	25
•	The analysis for volatiles was pain methanol. The reporting limit					
	Sufficient sample volume was not analysis. Therefore, a LCS/LCSD vaccuracy at a batch level.		-			

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

Laboratory Chronicle

CAT Analysis Name Method Trial# Date and Time Analyst Factor
08180 BTEX (Total Xylenes) SW-846 8021B 1 12/16/2002 12:14 Stephanie A Selis 25



Lancaster Laboratories Sample No. 3958032

Collected: 12/10/2002 10:40

by HAT

Account Number: 10666

Submitted: 12/11/2002 11:55

Reported: 12/17/2002 at 08:12

Discard: 03/18/2003

RX-14(15') DUP Grab Water Sample

Solutia

ISRT - Woburn, MA

1415D

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

SDG#: SIP80-09DUP

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Pactor
08213	BTEX (8021)					
00776 00777	Benzene Toluene	71-43-2 108-88-3	180. N.D.	0.20 0.20	ug/1 ug/1	1

CAT			•	Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Factor</b>
08213	BTEX (8021)	SW-846 8021B	1	12/13/2002 14:35	Melissa D Mann	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/13/2002 14:35	Melissa D Mann	n.a.



#### ANALYTICAL RESULTS

Prepared for:

Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

314-674-2025

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

# **SAMPLE GROUP**

The sample group for this submittal is 834290. Samples arrived at the laboratory on Thursday, December 12, 2002. The PO# for this group is 2000-08-07.

Client Description	<u>Lancaster Labs Number</u>
RX-15 (15') Grab Water Sample	3959403
RX-15(7.5.10') Grab Soil Sample	3959404
RX-16 (15') Grab Water Sample	3959405
RX-16(7.5.10') Grab Soil Sample	3959406
RX-16(7.5.10') DUP Grab Soil Sample	3959407
RX-15 (29') Grab Water Sample	3959408
RX-16 (29') Grab Water Sample	3959409
TB121102 Water Sample	3959410
TB121102 Methanol Sample	3959411

#### **METHODOLOGY**

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

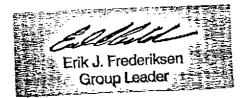
1 COPY TO	Roux, Inc.	Attn: Mr. Larry McTiernan
1 COPY TO	Solutia, Inc.	Attn: Mr. Jorge Garcia
1 COPY TO	Data Package Group	





Questions? Contact your Client Services Representative Barbara A Weyandt at (717) 656-2300.

Respectfully Submitted,





Lancaster Laboratories Sample No. WW 3959403

Collected:12/11/2002 10:25

by HAT

Account Number: 10666

Submitted: 12/12/2002 09:50

Reported: 12/18/2002 at 21:19

Discard: 03/19/2003

RX-15 (15') Grab Water Sample

Solutia

CAT

No.

ISRT - Woburn, MA

RC155 SDG#: SIP80-10

Analysis Name

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

As Received

Method Dilution
Detection Units Factor

Limit

08213 BTEX (8021)

00776 Benzene 71-43-2 2,900. 2.0 ug/l 10 00777 Toluene 108-88-3 5.1 J 2.0 ug/l 10

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

The reporting limits were raised because sample dilution was necessary to bring target compounds into the calibration range of the system.

CAS Number

Laboratory Chronicle

Result

		Haberacer,	,	111010		
CAT				Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/16/2002 22:33	Martha L Seidel	10
01146	GC VOA Water Prep	SW-846 5030B	1	12/16/2002 22:33	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. SW 3959404

Collected:12/11/2002 12:50

by HAT

Account Number: 10666

Submitted: 12/12/2002 09:50

Reported: 12/18/2002 at 21:19

Discard: 03/19/2003

RX-15(7.5.10') Grab Soil Sample

Solutia

ISRT - Woburn, MA

RX15S SDG#: SIP80-11

Solutia, Inc. 575 Maryville Centre Drive

St. Louis MO 63141

CAT			Dry	Dry Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
00111	Moisture	n.a.	24.9	0.50	*	1
08180	"Moisture" represents the loss 103 - 105 degrees Celsius. The as-received basis. BTEX (Total Xylenes)		-			
	(100H2 M210H00)					
08183	Benzene	71-43-2	3.7	1.4	ug/kg	12.8
08184	Toluene	108-88-3	N.D.	1.4	ug/kg	12.8
	The analysis for volatiles was in methanol. The reporting lim					

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

Laboratory Chronicle Analysis Dilution CAT Trial# **Factor** Method Date and Time Analyst No. Analysis Name EPA 160.3 modified 1 12/13/2002 09:02 Helen L Schaeffer 00111 Moisture 12.8 08180 BTEX (Total Xylenes) SW-846 8021B 1 12/16/2002 15:25 Stephanie A Selis



Lancaster Laboratories Sample No. WW 3959405

Collected:12/11/2002 10:55

by HAT

Account Number: 10666

St. Louis MO 63141

575 Maryville Centre Drive

Solutia, Inc.

Submitted: 12/12/2002 09:50

Reported: 12/18/2002 at 21:19

Discard: 03/19/2003

RX-16 (15') Grab Water Sample

Solutia

CAT

No.

ISRT - Woburn, MA

X1615 SDG#: SIP80-12

Analysis Name

As Received

Method Dilution
Detection Units Factor
Limit

08213 BTEX (8021)

00776 Benzene 71-43-2 2,400 2.0 ug/l 10 00777 Toluene 108-88-3 4.0 J 2.0 ug/l 10

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a MS LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

The reporting limits were raised because sample dilution was necessary to bring target compounds into the calibration range of the system.

CAS Number

Laboratory Chronicle

Result

Dilution CAT Analysis Trial# Date and Time No. Analysis Name Method Analyst **Factor** 08213 BTEX (8021) SW-846 8021B 12/16/2002 23:05 Martha L Seidel 10 01146 GC VOA Water Prep SW-846 5030B 12/16/2002 23:05 Martha L Seidel n.a.



Lancaster Laboratories Sample No. SW 3959406

Collected:12/11/2002 13:00

by HAT

Account Number: 10666

Submitted: 12/12/2002 09:50

Reported: 12/18/2002 at 21:19

Discard: 03/19/2003

RX-16(7.5.10') Grab Soil Sample

Solutia

ISRT - Woburn, MA

RX167 SDG#: SIP80-13

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

	1		Dry		
		Dry	Method		Dilution
Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
Moisture	n.a.	14.9	0.50	*	1
"Moisture" represents the los 103 - 105 degrees Celsius. Th as-received basis.	s in weight of t he moisture resul	the sample aft treported ab	er oven drying at ove is on an		
BTEX (Total Xylenes)					
Benzene	71-43-2	1,500.	13.	ug/kg	142.5
Toluene	108-88-3	290.	13.	ug/kg	142.5
in methanol. The reporting l Sufficient sample volume was	imits were adjus	sted appropria perform a MS	tely. /MSD for this		
	Moisture "Moisture" represents the los 103 - 105 degrees Celsius. Th as-received basis.  BTEX (Total Xylenes)  Benzene Toluene The analysis for volatiles wa in methanol. The reporting I  Sufficient sample volume was	Moisture n.a.  "Moisture" represents the loss in weight of t 103 - 105 degrees Celsius. The moisture result as-received basis.  BTEX (Total Xylenes)  Benzene 71-43-2  Toluene 108-88-3  The analysis for volatiles was performed on a in methanol. The reporting limits were adjust  Sufficient sample volume was not available to	Moisture n.a. 14.9  "Moisture" represents the loss in weight of the sample aft 103 - 105 degrees Celsius. The moisture result reported ab as-received basis.  BTEX (Total Xylenes)  Benzene 71-43-2 1,500. Toluene 108-88-3 290.  The analysis for volatiles was performed on a sample which in methanol. The reporting limits were adjusted appropria	Analysis Name  CAS Number  Result  Detection Limit  Moisture  n.a.  14.9  0.50  "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.  BTEX (Total Xylenes)  Benzene  71-43-2  1,500.  13.	Analysis Name  CAS Number  Result  Detection Limit  Moisture  n.a.  14.9  0.50  Moisture* represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.  BTEX (Total Xylenes)  Benzene  71-43-2  1,500.  13.  ug/kg  Toluene  108-88-3  290.  13.  ug/kg  The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.  Sufficient sample volume was not available to perform a MS/MSD for this

A poor surrogate recovery was observed due to the dilution needed to

perform the analysis.

accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

			Laboratory	r unro	nicie		
	CAT		_		Analysis		Dilution
	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor _
	00111	Moisture	EPA 160.3 modified	1	12/13/2002 09:02	Helen L Schaeffer	1
-	08180	BTEX (Total Xylenes)	SW-846 8021B	1	12/16/2002 18:35	Stephanie A Selis	142.5





Lancaster Laboratories Sample No. SW 3959407

Collected:12/11/2002 13:00

by HAT

Account Number: 10666

St. Louis MO 63141

575 Maryville Centre Drive

Solutia, Inc.

Submitted: 12/12/2002 09:50

Reported: 12/18/2002 at 21:19

Discard: 03/19/2003

RX-16(7.5.10') DUP Grab Soil Sample

Solutia

CAT

No.

00118

ISRT - Woburn, MA

RX16D SDG#: SIP80-14

As Received

0.50

As Received Method Dilution

Analysis Name CAS Number Result Detection Units Factor

Limit

14.9

08180 BTEX (Total Xylenes)

Moisture

08183 Benzene 71-43-2 1,300. 110. ug/kg 1350 08184 Toluene 108-88-3 260. J 110. ug/kg 1350

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

n.a.

Sufficient sample volume was not available to perform a MS/MSD for this

analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

A poor surrogate recovery was observed due to the dilution needed to perform the analysis.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

methanol in the field.

Laboratory Chronicle

Dilution CAT Analysis Trial# Date and Time **Factor** Method Analyst No. Analysis Name 00118 Moisture EPA 160.3 modified 12/13/2002 09:02 Helen L Schaeffer 1 1350 12/16/2002 19:13 Stephanie A Selis 08180 BTEX (Total Xylenes) SW-846 8021B 1

992 4



Lancaster Laboratories Sample No. WW 3959408

Collected:12/11/2002 14:15

by HAT

Account Number: 10666

Submitted: 12/12/2002 09:50

Reported: 12/18/2002 at 21:19

Discard: 03/19/2003

RX-15 (29') Grab Water Sample

Solutia

ISRT - Woburn, MA

X1529 SDG#: SIP80-15

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection	Units	Dilution Pactor
•	······································			Limit		
08213	BTEX (8021)					-
00776	Benzene	71-43-2	1.4	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
	Sufficient sample volume was not analysis. However, a MS was per: performed to demonstrate precis.	formed. In add	ition, a LCS/LCS	D was		

_ 1 .		
Laboratory	('broble   c	_

CAT			-	Analysis		Dilution
No.	Analysis Name	Method	Trial# 1	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1 1	2/17/2002 02:53	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1 1	2/17/2002 02:53	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. WW 3959409

Collected:12/11/2002 14:05

by HAT

Account Number: 10666

Submitted: 12/12/2002 09:50

Reported: 12/18/2002 at 21:19

Discard: 03/19/2003

RX-16 (29') Grab Water Sample

Solutia

ISRT - Woburn, MA

X1629 SDG#: SIP80-16

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	1,200.	1.0	ug/l	5
00777	Toluene	108-88-3	N.D.	1.0	ug/1	5
	Sufficient sample volume was no analysis. However, a MS was per performed to demonstrate preci-	formed. In add	lition, a LCS/LCS	D was		

The reporting limits were raised because sample dilution was necessary to bring target compounds into the calibration range of the system.

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CAT			-	Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/16/2002 23:38	Martha L Seidel	5
01146	GC VOA Water Prep	SW-846 5030B	1	12/16/2002 23:38	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. WW 3959410

Collected:12/11/2002 00:00 by HAT

Account Number: 10666

Submitted: 12/12/2002 09:50

Reported: 12/18/2002 at 21:20

Discard: 03/19/2003 TB121102 Water Sample

Solutia

ISRT - Woburn, MA

110TB SDG#: SIP80-17TB

Solutia, Inc. 575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776 00777	Benzene Toluene	71-43-2 108-88-3	N.D. N.D.	0.20 0.20	ug/l ug/l	1 1

		Laborator	y unro	uicte		
CXT			-	Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Factor</b>
08213	BTEX (8021)	SW-846 8021B	1	12/14/2002 08:12	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/14/2002 08:12	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. G5 3959411

Collected:12/11/2002 00:00

by HAT

Account Number: 10666

Submitted: 12/12/2002 09:50

Reported: 12/18/2002 at 21:20

Discard: 03/19/2003

TB121102 Methanol Sample

Solutia

ISRT - Woburn, MA

TBM11 SDG#: SIP80-18TB

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT			As Received	As Received Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
08180	BTEX (Total Xylenes)					
08183	Benzene	71-43-2	N.D.	2.0	ug/kg	25
08184	Toluene	108-98-3	N.D.	2.0	ug/kg	25
	The analysis for volatile in methanol. The reporti					
	Sufficient sample volume	was not available to	perform a MS/MS	D for this		

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

Laboratory Chronicle

CAT

No. Analysis Name

Method

Trial Date and Time

Analyst

Factor

08180

BTEX (Total Xylenes)

SW-846 8021B

1 12/16/2002 12:52

Stephanie A Selis

25



#### ANALYTICAL RESULTS

Prepared for:

Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

314-674-2025

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

# SAMPLE GROUP

The sample group for this submittal is 833705. Samples arrived at the laboratory on Saturday, December 07, 2002. The PO# for this group is 2000-08-07.

Client Description	Lancaster Labs Number
RX-8(15') Grab Water Sample	3956263
RX-8(7.5-10') Grab Soil Sample	3956264
RX-8(31') Grab Water Sample	3956265
RX-11(15') Grab Water Sample	3956266
RX-11(7.5-10') Grab Soil Sample	3956267
RX-11(31') Grab Water Sample	3956268
TB120602 Water Sample	3956269
TB120602 Methanol Sample	3956270

# **METHODOLOGY**

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

1 COPY TO	Roux, Inc.	Attn: Mr. Larry McTiernan
1 COPY TO	Solutia, Inc.	Attn: Mr. Jorge Garcia
1 COPY TO	Data Package Group	



99996

# **Analysis Report**



Questions? Contact your Client Services Representative Barbara A Weyandt at (717) 656-2300.

Respectfully Submitted,

Steve Stabinger
Group Leader



Lancaster Laboratories Sample No. WW 3956263

Collected:12/06/2002 11:55

by LC

performed to demonstrate precision and accuracy at a batch level.

Account Number: 10666

Submitted: 12/07/2002 10:00

Reported: 12/13/2002 at 14:01

Discard: 03/14/2003

RX-8(15') Grab Water Sample

Solutia

ISRT - Woburn, MA

RX815 SDG#: SIP79-01

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT	·		As Received	As Received Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	17,000.	10.	ug/l	50
00777	Toluene	108-88-3	95.	10.	ug/l	50
	Sufficient sample volume was no analysis. However, a MS was per					

Laboratory Chronicle
Analysis Dilution

CAT Factor Analysis Name Method Trial# Date and Time Analyst No. SW-846 8021B 12/11/2002 01:53 Martha L Seidel 50 1 BTEX (8021) 08213 GC VOA Water Prep SW-846 5030B 12/11/2002 01:53 Martha L Seidel n.a. 01146



Lancaster Laboratories Sample No. 3956264

Collected: 12/06/2002 11:00

by LC

Account Number: 10666

Submitted: 12/07/2002 10:00

Reported: 12/13/2002 at 14:01

Discard: 03/14/2003

RX-8(7.5-10') Grab Soil Sample

Solutia

ISRT - Woburn, MA

RX8-7 SDG#: SIP79-02 Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

Moisture

Dry

Dilution CAT Dry Method Detection No. Analysis Name CAS Number Result Unita **Pactor** Limit

00111 18.5 0.50 n.a. "Moisture" represents the loss in weight of the sample after oven drying at

103 - 105 degrees Celsius. The moisture result reported above is on an

as-received basis.

08180 BTEX (Total Xylenes)

08183 Benzene 71-43-2 110,000. 120. ug/kg 1225 08184 Toluene 108-88-3 40,000. 120. ug/kg 1225

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and

accuracy at a batch level.

A poor surrogate recovery was observed due to the dilution needed to

perform the analysis.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

methanol in the field.

Laboratory Chronicle

Dilution CAT Analysis Method Trial# Date and Time Analyst Factor No. Analysis Name Scott W Freisher EPA 160.3 modified 1 12/10/2002 17:06 1 00111 Moisture 12/12/2002 05:38 Stephanie A Selis 1225 -08180 BTEX (Total Xylenes) SW-846 8021B

> Lancaster Laboratories, inc. 2425 New Holland Pike



PO Box 12425 Lancaster, PA 17605-2425 717-656-2300 Fax: 717-656-2681 ē



Lancaster Laboratories Sample No. 3956265 WW

Collected:12/06/2002 15:30

by LC

Account Number: 10666

Submitted: 12/07/2002 10:00

Reported: 12/13/2002 at 14:01

Discard: 03/14/2003

RX-8(31') Grab Water Sample

Solutia

ISRT - Woburn, MA

RX831 SDG#: SIP79-03

Solutia, Inc. 575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	15,000.	10.	ug/l	50
00777	Toluene	108-88-3	960.	10.	ug/l	50
	Sufficient sample volume was no analysis. However, a MS was per performed to demonstrate precis	formed. In add	lition, a LCS/LCS	D was		

			-,			
CAT	CAT Analysis					
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 80218	1	12/11/2002 02:26	Martha L Seidel	50
01146	GC VOA Water Prep	SW-846 5030B	1	12/11/2002 02:26	Martha L Seidel	n.a.



3956266 Lancaster Laboratories Sample No. WW

Collected:12/06/2002 10:15

by LC

Account Number: 10666

St. Louis MO 63141

575 Maryville Centre Drive

Submitted: 12/07/2002 10:00

Reported: 12/13/2002 at 14:01

Discard: 03/14/2003

RX-11(15') Grab Water Sample

Solutia

ISRT - Woburn, MA

X1115

SDG#: SIP79-04

Solutia, Inc.

As Received

As Received

Method

10.

10.

Dilution

Analysis Name No.

CAS Number

Result

Detection Limit

Factor

BTEX (8021)

08213 00776 00777

CAT

Benzene

71-43-2 108-88-3 13,000.

74.

Units

ug/l

ug/l

50 50

Toluene Sufficient sample volume was not available to perform a MSD

analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

CAT			-	Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Pactor</b>
08213	BTEX (8021)	SW-846 8021B	1	12/11/2002 10:05	Linda C Pape	50
01146	GC VOA Water Prep	SW-846 5030B	1	12/11/2002 10:05	Linda C Pape	n.a.



Lancaster Laboratories Sample No. SW 3956267

Collected:12/06/2002 10:45

by LC

Account Number: 10666

Submitted: 12/07/2002 10:00

Reported: 12/13/2002 at 14:01

Discard: 03/14/2003

RX-11(7.5-10') Grab Soil Sample

Solutia

ISRT - Woburn, MA

RX117 SDG#: SIP79-05 Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT			Dry	D <del>ry</del> Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
00111	Moisture represents the loss in 103 - 105 degrees Celsius. The mosas-received basis.				*	1
08180	BTEX (Total Xylenes)					

24,000. 580 08183 Benzene 71-43-2 ug/kg 580 08184 Toluene 108-88-3 9,300. ug/kg

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

A poor surrogate recovery was observed due to the dilution needed to perform the analysis.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

CAT				Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Factor</b>
00111	Moisture	EPA 160.3 modified	1	12/10/2002 17:06	Scott W Freisher	1
08180	BTEX (Total Xylenes)	SW-846 8021B	1	12/12/2002 05:01	Stephanie A Selis	580 _



Lancaster Laboratories Sample No. 3956268

Collected:12/06/2002 14:30

Account Number: 10666

575 Maryville Centre Drive

Submitted: 12/07/2002 10:00

Reported: 12/13/2002 at 14:01

Discard: 03/14/2003

RX-11(31') Grab Water Sample

Solutia

CAT

No.

ISRT - Woburn, MA

X1131 SDG#: SIP79-06

Analysis Name

St. Louis MO 63141

Solutia, Inc.

As Received

As Received

Result

Method Detection Dilution

Units **Pactor** Limit

BTEX (8021) 08213

00776 Benzene 00777 Toluene 71-43-2 400. 108-88-3

CAS Number

ug/1

5 ug/l

Sufficient sample volume was not available to perform a Med for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

	naboracory	CILLO.	TTCTC		
	Analysis				Dilution
Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
BTEX (8021)	SW-846 8021B	1	12/11/2002 03:31	Martha L Seidel	5
BTEX (8021)	SW-846 8021B	1	12/11/2002 11:11	Linda C Pape	5
GC VOA Water Prep	SW-846 5030B	1	12/11/2002 03:31	Linda C Pape	n.a.
	BTEX (8021) BTEX (8021)	Analysis Name Method BTEX (8021) SW-846 8021B BTEX (8021) SW-846 8021B	Analysis Name Method Trial# BTEX (8021) SW-846 8021B 1 BTEX (8021) SW-846 8021B 1	Analysis Name         Method         Trial#         Date and Time           BTEX (8021)         SW-846 8021B         1 12/11/2002 03:31           BTEX (8021)         SW-846 8021B         1 12/11/2002 11:11	Analysis Name Method Trial# Date and Time Analyst  BTEX (8021) SW-846 8021B 1 12/11/2002 03:31 Martha L Seidel  BTEX (8021) SW-846 8021B 1 12/11/2002 11:11 Linda C Pape

Lancaster, PA 17605-2425 717-656-2300 Fax: 717-656-2681 

Lancaster Laboratories Sample No. WW 3956269

Collected:12/06/2002 00:00

Account Number: 10666

Submitted: 12/07/2002 10:00 Reported: 12/13/2002 at 14:01 Solutia, Inc.

Discard: 03/14/2003

575 Maryville Centre Drive

TB120602 Water Sample

St. Louis MO 63141

Solutia

ISRT - Woburn, MA

RXTRW

SDG#: SIP79-07TB

CAT			As Received	As Received Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/1	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
	Sufficient sample volume was no	t availabl <b>e t</b> o	perform a MSD i	or this		
	analysis. However, a MS was per	formed. In add	dition, a LCS/LCS	SD was		
	performed to demonstrate precision and accuracy at a batch level.					

Laboratory Chronicle						
CAT			Analysis			Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/10/2002 23:43	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/10/2002 23:43	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. G5 3956270

Collected:12/06/2002 00:00

Submitted: 12/07/2002 10:00 Reported: 12/13/2002 at 14:01

Discard: 03/14/2003

TB120602 Methanol Sample

Solutia

ISRT - Woburn, MA

RXTBM SDG#: SIP79-08TB

Account Number: 10666

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

As Received

CAT As Received Method
No. Analysis Name CAS Number Result Detection

Method Dilution
Detection Units Factor
Limit

08180 BTEX (Total Xylenes)

08183 Benzene 71-43-2 3.9 J 2.0 ug/kg 25 08184 Toluene 108-88-3 N.D. 2.0 ug/kg 25

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

Laboratory Chronicle

 CAT
 Analysis
 Analysis
 Dilution

 No.
 Analysis Name
 Method
 Trial Date and Time
 Analyst
 Factor

 08180
 BTEX (Total Xylenes)
 SW-846 8021B
 1
 12/12/2002 00:44
 Stephanie A Selis
 25



# **ANALYTICAL RESULTS**

Prepared for:

Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

314-674-2025

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

# SAMPLE GROUP

The sample group for this submittal is 833914. Samples arrived at the laboratory on Tuesday, December 10, 2002. The PO# for this group is 2000-08-07.

Client Description	<u>Lancaster Labs Number</u>
RX-12(15') Grab Water Sample	3957303
RX-13(15') Grab Water Sample	3957304
RX-12(7.5-10') Grab Soil Sample	3957305
RX-13(5-7.5') Grab Soil Sample	3957306
RX-12(31') Grab Water Sample	3957307
RX-13(29') Grab Water Sample	3957308
TB120902 Water Sample	3957309
TB120902 Methanol Sample	3957310

# **METHODOLOGY**

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

1 COPY TO	Roux, Inc.	Attn: Mr. Larry McTiernan
1 COPY TO	Solutia, Inc.	Attn: Mr. Jorge Garcia
1 COPY TO	Data Package Group	



9916

# Analysis Report



Questions? Contact your Client Services Representative Barbara A Weyandt at (717) 656-2300.

Respectfully Submitted,

Steven A. Skiles Sr. Chemist

717-656-2300 Fax: 717-656-2681



Lancaster Laboratories Sample No. 3957303

Collected:12/09/2002 10:50

by HAT

Account Number: 10666

Submitted: 12/10/2002 09:20

Reported: 12/16/2002 at 02:03

Discard: 03/17/2003

RX-12(15') Grab Water Sample

Solutia

ISRT - Woburn, MA

R1215 SDG#: SIP79-08 Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

As Received Dilution CAT As Received Method Units Factor Result Detection No. Analysis Name CAS Number Limit 08213 BTEX (8021)

00776 71-43-2 0.52 0.20 ug/l 1 Benzene N.D. 0.20 ug/l 108-88-3 00777 Toluene

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

Dilution Analysis CAT Date and Time Analyst Factor No. Analysis Name Method Melissa D Mann 12/12/2002 17:17 SW-846 8021B 1 08213 BTEX (8021) 01146 GC VOA Water Prep SW-846 5030B 12/12/2002 17:17 Melissa D Mann n.a.



3957304 Lancaster Laboratories Sample No.

Collected: 12/09/2002 10:20

by HAT

Account Number: 10666

Submitted: 12/10/2002 09:20

Reported: 12/16/2002 at 02:03

Discard: 03/17/2003

RX-13(15') Grab Water Sample

Solutia

CAT

No.

00777

ISRT - Woburn, MA

R1315 SDG#: SIP79-09 Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

As Received

Dilution Method As Received Result Detection Units Factor CAS Number Analysis Name Limit 08213 BTEX (8021) 71-43-2 1.7 0.20 00776 ug/l Benzene

108-88-3 0.25 0.20 Toluene Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

						•
CAT				Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/12/2002 17:50	Melissa D Mann	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/12/2002 17:50	Melissa D Mann	n.a.

ug/l



Lancaster Laboratories Sample No. SW 3957305

Collected:12/09/2002 10:50

by HAT

Account Number: 10666

Submitted: 12/10/2002 09:20

Reported: 12/16/2002 at 02:03

Discard: 03/17/2003

RX-12(7.5-10') Grab Soil Sample

Solutia

ISRT - Woburn, MA

R1275 SDG#: SIP79-10

Solutia, Inc. 575 Maryville Centre Drive

St. Louis MO 63141

CAT			Dry	Dry Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
00111	Moisture	n.a.	4.48	0.50	8	1
	"Moisture" represents the los 103 - 105 degrees Celsius. Th as-received basis.				·	
08180	BTEX (Total Xylenes)					
08183	Benzene	71-43-2	N.D.	1.2	ug/kg	14.8
08184	Toluene	108-88-3	N.D.	1.2	ug/kg	14.8
	The analysis for volatiles wa in methanol. The reporting 1					

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and

accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

methanol in the field.

CAT			•	Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Factor</b>
00111	Moisture	EPA 160.3 modified	1	12/12/2002 08:39	Helen L Schaeffer	1
08180	BTEX (Total Xylenes)	SW-846 8021B	1	12/12/2002 01:57	Stephanie A Selis	14.8



Lancaster Laboratories Sample No. SW 3957306

Collected: 12/09/2002 10:50

by HAT

Account Number: 10666

Submitted: 12/10/2002 09:20

Reported: 12/16/2002 at 02:03

Discard: 03/17/2003

RX-13(5-7.5') Grab Soil Sample

Solutia

ISRT - Woburn, MA

R1375 SDG#: SIP79-11

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

Markey

CAT			Dry	Dry Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
00111	Moisture	n.a.	17.9	0.50	8	1
	"Moisture" represents the los 103 - 105 degrees Celsius. Th as-received basis.					
08180	BTEX (Total Xylenes)					
08183	Benzene	71-43-2	6.7 (J)	6.5	ug/kg	67
08184	Toluene	108-88-3	27.	6.5	ug/kg	67

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

A poor surrogate recovery was observed due to the dilution needed to perform the analysis.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

Laboratory Chronicle

CAT			•	Dilution		
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor -
00111	Moisture	EPA 160.3 modified	1	12/12/2002 08:39	Helen L Schaeffer	1
08180	BTEX {Total Xylenes}	SW-846 8021B	1	12/12/2002 09:00	Stephanie A Selis	67

2



Dilution

3957307 Lancaster Laboratories Sample No.

Collected:12/09/2002 14:30

by HAT

performed to demonstrate precision and accuracy at a batch level.

Account Number: 10666

Submitted: 12/10/2002 09:20

Reported: 12/16/2002 at 02:03

Discard: 03/17/2003

RX-12(31') Grab Water Sample .

Solutia

ISRT - Woburn, MA

R1231

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

SDG#: SIP79-12 As Received As Received Method

CAT No. Analysis Name CAS Number Result Detection Unita Factor Limit 08213 BTEX (8021) 0.20 00776 Benzene 71-43-2 ug/l 1 1 00777 Toluene 108-88-3 N.D. 0.20 ug/l Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was

		napotato.	ry Chiro	111010		
CAT				Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/12/2002 18:22	Melissa D Mann	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/12/2002 18:22	Melissa D Mann	n.a.



Page I of I

3957308 Lancaster Laboratories Sample No. WW

Collected: 12/09/2002 14:40

by HAT

Account Number: 10666

Submitted: 12/10/2002 09:20

Reported: 12/16/2002 at 02:03

Discard: 03/17/2003

RX-13(29') Grab Water Sample

Solutia

ISRT - Woburn, MA

R1329

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

SDG#: SIP79-13 As Received

Dilution CAT As Received Method Result Factor No. Analysis Name CAS Number Detection Units Limit 08213 BTEX (8021) 71-43-2 1.0 5 00776 2.7 ug/l Benzene 108-88-3 5 00777 9.4 1.0 ug/l Toluene Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Due to excessive foaming of the sample, normal reporting limits were not attained.

CAT			-	Dilution		
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/12/2002 21:28	Melissa D Mann	5
01146	GC VOA Water Prep	SW-846 5030B	1	12/12/2002 21:28	Melissa D Mann	n.a.



Lancaster Laboratories Sample No. WW 3957309

Collected:12/09/2002 00:00

Account Number: 10666

Submitted: 12/10/2002 09:20

Solutia, Inc.

Reported: 12/16/2002 at 02:03

575 Maryville Centre Drive

Discard: 03/17/2003 TB120902 Water Sample St. Louis MO 63141

Solutia

ISRT - Woburn, MA

TBWAT

SDG#: SIP79-14TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
	Sufficient sample volume was no analysis. However, a MS was per. performed to demonstrate precis:	formed. In add	ition, a LCS/LCS	) was		

CAT		Analysis			Dilution	
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/12/2002 14:36	Melissa D Mann	1
01146	GC VOA Water Prep	\$W-846 5030B	1	12/12/2002 14:36	Melissa D Mann	n.a.



Lancaster Laboratories Sample No. G5 3957310

Collected:12/09/2002 00:00

Account Number: 10666

Submitted: 12/10/2002 09:20

Solutia, Inc.

Solutia, Inc.

Maryville Centre Drive

Reported: 12/16/2002 at 02:03 Discard: 03/17/2003

St. Louis MO 63141

TB120902 Methanol Sample

Solutia

ISRT - Woburn, MA

TBMEO SDG#: SIP79-15TB

				As Received		
CAT	v.		As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
08180	BTEX (Total Xylenes)					
08183	Benzene	71-43-2	N.D.	2.0	ug/kg	25
08184	Toluene	108-88-3	N.D.	2.0	ug/kg	25
	The analysis for volatiles w in methanol. The reporting					
	Sufficient sample volume was analysis. Therefore, a LCS/L accuracy at a batch level.		-			
00405	Field Preserved Methanol The sample submitted for vol methanol in the field.	atile organ <b>ic ana</b>	lysis was preser	ved with		

Laboratory	Chronicl	_

CAT			Analysis			Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08180	BTEX (Total Xvlenes)	SW-846 8021B	1	12/12/2002 01:21	Stephanie A Selis	25



#### ANALYTICAL RESULTS

Prepared for:

Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

314-674-2025

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

#### **SAMPLE GROUP**

The sample group for this submittal is 833402. Samples arrived at the laboratory on Thursday, December 05, 2002. The PO# for this group is 2000-08-07.

Client Description	Lancaster Labs Number
RX-3 (15') Water Sample	3954649
RX-3 (0-2.5) Soil Sample	3954650
RX-9 (15') Water Sample	3954651
RX-9 (7.5-10) Soil Sample	3954652
RX-3 (23') Water Sample	3954653
RX-9 (15') DUP Water Sample	3954654
RX-9 (7.5-10) DUP Soil Sample	3954655
TB120402 Water Sample	3954656
TB120402 Methanol Sample	3954657

#### **METHODOLOGY**

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

1 COPY TO	Solutia, Inc.	Attn: Mr. Jorge Garcia
1 COPY TO	Roux, Inc.	Attn: Mr. Chris Milone
1 COPY TO	Data Package Group	

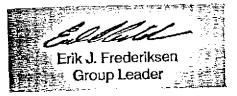


## **Analysis Report**



Questions? Contact your Client Services Representative Barbara A Weyandt at (717) 656-2300.

Respectfully Submitted,





Lancaster Laboratories Sample No. WW 3954649

Collected:12/04/2002 10:35

by HAT

performed to demonstrate precision and accuracy at a batch level.

Account Number: 10666

Submitted: 12/05/2002 09:50

Reported: 12/11/2002 at 10:30

Discard: 03/12/2003 RX-3 (15') Water Sample

Solutia

ISRT - Woburn, MA

RX3IR SDG#: SIP78-01

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

As Received

CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	370.	0.20	ug/l	1
00777	Toluene	108-88-3	5.7	0.20	ug/l	1
	Sufficient sample volume was no analysis. However, a MS was per		-			

		######################################	-1			
CAT				Analysis		Dilution
No.	Analysis Name	Method	Trials	Date and Time	Analyst	<b>Factor</b>
08213	BTEX (8021)	SW-846 8021B	1	12/07/2002 06:22	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/07/2002 06:22	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. SW 3954650

Collected:12/04/2002 10:35

by HAT

Account Number: 10666

Submitted: 12/05/2002 09:50

Reported: 12/11/2002 at 10:30

Discard: 03/12/2003

RX-3 (0-2.5) Soil Sample

Solutia

ISRT - Woburn, MA

X3025 SDG#: SIP78-02

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT			Dry	Dry Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
00111	Moisture	n.a.	8.77	0.50	*	1
	"Moisture" represents the loss 103 - 105 degrees Celsius. The as-received basis.					

08180 BTEX (Total Xylenes)

08183 Benzene 71-43-2 30. 5.7 ug/kg 65 08184 Toluene 108-88-3 220. 5.7 ug/kg 65

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

A poor surrogate recovery was observed due to the dilution needed to perform the analysis.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

### Laboratory Chronicle

CAT		•		Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
00111	Moisture	EPA 160.3 modified	1	12/06/2002 08:28	Helen L Schaeffer	1
08180	BTEX (Total Xylenes)	SW-846 8021B	1	12/10/2002 18:02	Deborah S Garrison	65 -
	CAT No. 00111 08180	No. Analysis Name 00111 Moisture	CAT No. Analysis Name Method 00111 Moisture EPA 160.3 modified	CAT No. Analysis Name Method Trial# 00111 Moisture EPA 160.3 modified 1	CAT         Analysis         Analysis Name         Method         Trial#         Date and Time           00111         Moisture         EPA 160.3 modified         1 12/06/2002 08:28	CAT No. Analysis Name Method Trial# Date and Time Analyst  00111 Moisture EPA 160.3 modified 1 12/06/2002 08:28 Helen L Schaeffer

0 0 9



Lancaster Laboratories Sample No. WW 3954651

Collected:12/04/2002 11:00

by HAT

Account Number: 10666

Submitted: 12/05/2002 09:50 Solutia, Inc.

Reported: 12/11/2002 at 10:30 575 Maryville Centre Drive

Discard: 03/12/2003 St. Louis MO 63141

Solutia

ISRT - Woburn, MA

RX915 SDG#: SIP78-03

RX-9 (15') Water Sample

				VP Keterven		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
08213	BTEX (8021)					
00776	Велzеле	71-43-2	210.	0.20	ug/l	1
00777	Toluene	108-88-3	94.	0.20	ug/l	1
	Sufficient sample volume was no	t available to	perform a MSD f	or this		
	analysis. However, a MS was per	formed. In add	lition, a LCS/LCS	D was		
	performed to demonstrate precis	ion and accura	i <b>cy at</b> a batch le	vel.		

			Ly Chilo	111010		
CAT				Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/07/2002 07:04	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/07/2002 07:04	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. SW 3954652

Collected:12/04/2002 11:00

by HAT

Account Number: 10666

Submitted: 12/05/2002 09:50

Reported: 12/11/2002 at 10:30

Discard: 03/12/2003

RX-9 (7.5-10) Soil Sample

Solutia

ISRT - Woburn, MA

97510 SDG#: SIP78-04

Solutia, Inc. 575 Maryville Centre Drive

St. Louis MO 63141

Dry CAT Method Dilution Dry No. Analysis Name CAS Number Result Detection Unita Factor Limit 00111 23.8 0.50 1 Moisture n.a.

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an

as-received basis.

08180 BTEX (Total Xylenes)

08183 Benzene 71-43-2 95,000. 160. ug/kg 1499 08184 Toluene 108-88-3 96,000. 160. ug/kg 1499

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

A poor surrogate recovery was observed due to the dilution needed to perform the analysis.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

Laboratory Chronicle

Dilution CAT Analysis Trial# Date and Time Analyst **Factor** No. Analysis Name Method EPA 160.3 modified 12/06/2002 08:28 Helen L Schaeffer 1 00111 Moisture 1 Deborah S Garrison 1499 -08180 BTEX (Total Xylenes) SW-846 8021B 12/10/2002 13:18



00011



Lancaster Laboratories Sample No. WW 3954653

Collected:12/04/2002 13:50 by HAT Acco

Submitted: 12/05/2002 09:50

Reported: 12/11/2002 at 10:30

Discard: 03/12/2003 RX-3 (23') Water Sample

Solutia

ISRT - Woburn, MA

RX323 SDG#: SIP78-05

Account Number: 10666

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Pactor
08213	BTEX (8021)					
00776	Benzene	71-43-2	1,100.	1.0	ug/l	5
00777	Toluene	108-88-3	120.	1.0	ug/l	5
	Sufficient sample volume was no	t available to	perform a MSD fo	or this		
	analysis. However, a MS was per	formed. In add	ition, a LCS/LCS	D was		
	performed to demonstrate precis					

CAT			•	Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Factor</b>
08213	BTEX (8021)	SW-846 8021B	1	12/07/2002 14:31	K. Robert James	5
01146	GC VOA Water Prep	SW-846 5030B	1	12/07/2002 14:31	K. Robert James	n.a.



Lancaster Laboratories Sample No. WW 3954654

Collected:12/04/2002 11:00

by HAT

performed to demonstrate precision and accuracy at a batch level.

Account Number: 10666

Submitted: 12/05/2002 09:50

Reported: 12/11/2002 at 10:30

Discard: 03/12/2003

RX-9 (15') DUP Water Sample

Solutia

ISRT - Woburn, MA

RX9DP SDG#: SIP78-06

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	220.	0.20	ug/1	1
00777	Toluene	108-88-3	100.	0.20	ug/l	1
	Sufficient sample volume was no analysis. However, a MS was per		<del>-</del>			

			-,			
CAT			_	Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/07/2002 13:48	K. Robert James	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/07/2002 13:48	K. Robert James	n.a.



Lancaster Laboratories Sample No. SW 3954655

Collected:12/04/2002 11:00

by HAT

Account Number: 10666

Submitted: 12/05/2002 09:50

Reported: 12/11/2002 at 10:31

Discard: 03/12/2003

RX-9 (7.5-10) DUP Soil Sample

Solutia

ISRT - Woburn, MA

9751D SDG#: SIP78-07

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

		•		Dry		
CAT			Dry	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
00111	Moisture	n.a.	23.6	0.50	+	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an					

as-received basis.

08180 BTEX (Total Xylenes)

08183 Benzene 71-43-2 87,000. 170. ug/kg 1579 08184 Toluene 108-88-3 100,000. 170. ug/kg 1579

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

A poor surrogate recovery was observed due to the dilution needed to perform the analysis.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

Laboratory Chronicle

Analysis Dilution CAT Factor Analysis Name Method Trial# Date and Time Analyst No. EPA 160.3 modified 12/06/2002 08:28 Helen L Schaeffer 1 1 00111 Moisture SW-846 8021B 1 12/10/2002 13:54 Deborah S Garrison 1579 -08180 BTEX (Total Xylenes)



9 9 1



Lancaster Laboratories Sample No. WW 3954656

Collected:12/04/2002 00:00

Account Number: 10666

Submitted: 12/05/2002 09:50

Solutia, Inc.

Reported: 12/11/2002 at 10:31

575 Maryville Centre Drive

Discard: 03/12/2003 TB120402 Water Sample St. Louis MO 63141

Solutia

ISRT - Woburn, MA

TB120 SDG#: SIP78-08TB

CAT			As Received	As Received Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	<b>Pactor</b>
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
	Sufficient sample volume was analysis. However, a MS was performed to demonstrate pre	performed. In ad	dition, a LCS/LCS	SD was		

			- 4 -			
CAT			_	Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/07/2002 03:30	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/07/2002 03:30	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. G5 3954657

Collected:12/04/2002 00:00

Account Number: 10666

Submitted: 12/05/2002 09:50

Solutia, Inc.

Reported: 12/11/2002 at 10:31

575 Maryville Centre Drive

Discard: 03/12/2003 TB120402 Methanol Sample St. Louis MO 63141

Solutia

ISRT - Woburn, MA

12042 SDG#: SIP78-09TB

CAT	•		As Received	As Received Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
08180	BTEX (Total Xylenes)					
08183	Benzene	71-43-2	N.D.	2.0	ug/kg	25
08184	Toluene	108-88-3	N.D.	2.0	ug/kg	25
	The analysis for volatiles was	nerformed on a	s sample which wa	as preserved		

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

Laboratory Chronicle

Dilution Analysis CAT Date and Time **Factor** No. Analysis Name Method Trial# Analyst 12/10/2002 05:44 Deborah S Garrison 25 SW-846 8021B 08180 BTEX (Total Xylenes)



#### ANALYTICAL RESULTS

Prepared for.

Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

314-674-2025

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

#### SAMPLE GROUP

The sample group for this submittal is 833546. Samples arrived at the laboratory on Friday, December 06, 2002. The PO# for this group is 2000-08-07.

Client Description	Lancaster Labs Number
RX-1(10-12.5') Grab Soil Sample	3955390
RX-1 (15') Grab Water Sample	3955391
RX-5 (15') Grab Water Sample	3955392
RX-5(7.5-10') Grab Soil Sample	3955393
RX-9 (33') Grab Water Sample	3955394
RX-5 (29') Grab Water Sample	3955395
RX-1 (30) Grab Water Sample	3955396
TB120402 Water Sample	3955397
TB120402 Methanol Sample	3955398

#### **METHODOLOGY**

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

I COPY TO	Roux, Inc.
1 COPY TO	Solutia, Inc.
1 COPY TO	Data Package Group

Attn: Mr. Larry McTiernan Attn: Mr. Jorge Garcia





# **Analysis Report**



Questions? Contact your Client Services Representative Barbara A Weyandt at (717) 656-2300.

Respectfully Submitted,

Steven A. Skiles Sr. Chemist



Lancaster Laboratories Sample No. 3955390

Collected: 12/05/2002 11:50

Account Number: 10666

575 Maryville Centre Drive

Submitted: 12/06/2002 09:15

Reported: 12/19/2002 at 17:38

Discard: 03/20/2003

RX-1(10-12.5') Grab Soil Sample

Solutia

ISRT - Woburn, MA

SDG#: SIP78-10 RX115

St. Louis MO 63141

Solutia, Inc.

Dry Method

Drv Result

Detection Limit

Unite

Dilution Factor

00111

CAS Number

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an

CAT

No.

n.a.

4.84

as-received basis. 08180 BTEX (Total Xylenes)

Analysis Name

Moisture

08183

Benzene

71-43-2

1.3

ug/kg ug/kg 16 16

108-88-3 N.D. 1.3 08184 The analysis for volatiles was performed on a sample which was preserved

in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

Laboratory Chronicle

CAT No. 00111

08180

Analysis Name Moisture

BTEX (Total Xylenes)

Method

EPA 160.3 modified SW-846 8021B

Analysis Trial# Date and Time 1

1

12/09/2002 09:24 12/10/2002 09:03

Analyst Nadine Fegley Deborah S Garrison Factor 1 16

Dilution





Lancaster Laboratories Sample No. 3955391

Collected:12/05/2002 09:55

Account Number: 10666

St. Louis MO 63141

Limit

575 Maryville Centre Drive

Submitted: 12/06/2002 09:15

Reported: 12/19/2002 at 17:38

Discard: 03/20/2003

RX-1 (15') Grab Water Sample

Solutia

CAT

No.

ISRT - Woburn, MA

RX111

Analysis Name

Solutia, Inc.

SDG#: SIP78-11

As Received Dilution Method Detection Unite Factor

BTEX (8021) 08213

00776 71-43-2 0.20 ug/l 1 Benzene 00777 108-88-3 0.20 ug/l 1 Toluene

CAS Number

MSD for this Sufficient sample volume was not available to perform analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

As Received

Result

CAT			Analysis					
Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Pactor</b>			
BTEX (8021)	SW-846 8021B	1	12/12/2002 13:01	Matthew E Barton	1			
GC VOA Water Prep	SW-846 5030B	1	12/12/2002 13:01	Matthew E Barton	n.a.			
	BTEX (8021)	Analysis Name Method BTEX (8021) SW-846 8021B	Analysis Name Method Trial# BTEX (8021) SW-846 8021B 1	Analysis Name Method Trial# Date and Time BTEX (8021) SW-846 8021B 1 12/12/2002 13:01	Analysis Name Method Trial# Date and Time Analyst  BTEX (8021) SW-846 8021B 1 12/12/2002 13:01 Matthew E Barton			



3955392 Lancaster Laboratories Sample No.

Collected:12/05/2002 10:05

by LC

Account Number: 10666

Submitted: 12/06/2002 09:15

Reported: 12/19/2002 at 17:38

Discard: 03/20/2003

RX-5 (15') Grab Water Sample

Solutia

CAT No.

ISRT - Woburn, MA

Analysis Name

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

RX515 SDG#: SIP78-12

As Received

Method Dilution Detection Units **Factor** 

BTEX (8021) 08213

00776 Benzene 00777 Toluene 71-43-2 108-88-3

CAS Number

790. 1.8

Result

1.0 0.20

Limit

ug/l

ug/l

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Due to the nature of the sample matrix, the surrogate standard recovery is above the range of specifications.

CAT			•	Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Factor</b>
08213	BTEX (8021)	SW-846 8021B	1	12/12/2002 13:30	Matthew E Barton	5
08213	BTEX (8021)	SW-846 8021B	1	12/13/2002 02:19	Matthew E Barton	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/12/2002 13:30	Matthew E Barton	n.a.



Lancaster Laboratories Sample No. 3955393 SW

Collected: 12/05/2002 11:45 Account Number: 10666

Submitted: 12/06/2002 09:15

Reported: 12/19/2002 at 17:38 575 Maryville Centre Drive

Discard: 03/20/2003 St. Louis MO 63141

RX-5(7.5-10') Grab Soil Sample Solutia

ISRT - Woburn, MA

RX510 SDG#: SIP78-13

Dry Dilution Method CAT Dry Factor CAS Number Detection Units No. Analysis Name Result Limit 00111 Moisture n.a. 1 "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. 08180 BTEX (Total Xylenes)

Solutia, Inc.

ug/kg 71-43-2 7.6 1.3

13 08183 Benzene N.D. ug/kg 13 108-88-3 1.3 08184 Toluene

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and

accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

methanol in the field.

Laboratory Chronicle

CAT				Dilution		
No.	Analysis Name	Method	Trial#	Date and Time.	Analyst	Factor
00111	Moisture	EPA 160.3 modified	1 1	12/09/2002 09:24	Nadine Fegley	1
08180	BTEX (Total Xylenes)	SW-846 8021B	1 1	2/10/2002 09:40	Deborah S Garrison	13

0022



Lancaster Laboratories Sample No. WW 3955394

Collected:12/05/2002 08:45

by L(

performed to demonstrate precision and accuracy at a batch level.

Account Number: 10666

St. Louis MO 63141

575 Maryville Centre Drive

Solutia, Inc.

Submitted: 12/06/2002 09:15

Reported: 12/19/2002 at 17:39

Discard: 03/20/2003

RX-9 (33') Grab Water Sample

Solutia

ISRT - Woburn, MA

RX933

SDG#: SIP78-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	2,600.	4.0	ug/l	20
00777	Toluene	108-88-3	450.	4.0	ug/l	20
	Sufficient sample volume was not analysis. However, a MS was peri		_			

- 1	4	<b>~1</b> 1	• • •
Labora	COTV	Chror	ncle

CAT			-	Dilution		
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/12/2002 13:59	Matthew E Barton	20
01146	GC VOA Water Prep	SW-846 5030B	, 1	12/12/2002 13:59	Matthew E Barton	n.a.



Lancaster Laboratories Sample No. WW 3955395

Collected:12/05/2002 14:30

by LC

Account Number: 10666

Submitted: 12/06/2002 09:15

Reported: 12/19/2002 at 17:39

Discard: 03/20/2003

RX-5 (29') Grab Water Sample -

Solutia

ISRT - Woburn, MA

RX529 SDG#: SIP78-15

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor	
08213	BTEX (8021)						
00776	Benzene	71-43-2	13,000.	20.	ug/1	100	
00777	Toluene	108-88-3	1,800.	20.	ug/l	100	
	Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.						

			-, -, -, -, -, -, -, -, -, -, -, -, -, -			
CAT				Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Pactor
08213	BTEX (8021)	SW-846 8021B	1	12/12/2002 14:29	Matthew B Barton	100
01146	GC VOA Water Prep	SW-846 5030B	1	12/12/2002 14:29	Matthew E Barton	n.a.



Lancaster Laboratories Sample No. WW 3955396

Collected:12/05/2002 13:00 by LC Account Number: 10666

Submitted: 12/06/2002 09:15

Reported: 12/19/2002 at 17:39

Discard: 03/20/2003

RX-1 (30) Grab Water Sample

Solutia

ISRT - Woburn, MA

RX130 SDG#: SIP78-16

Solutia, Inc. 575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor	
08213	BTEX (8021)						
00776	Benzene	71-43-2	3,800.	4.0	ug/l	20	
00777	Toluene	108-88-3	1,600.	4.0	ug/l	20	
	Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.						

Laboratory	z Chroni	cle
TWO TWO T		

CAT			Analysis			
No.	Analysis Name	Method	Trial#		Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	12/12/2002 14:58	Matthew E Barton	20
01146	GC VOA Water Prep	SW-846 5030B	1	12/12/2002 14:58	Matthew E Barton	n.a.



Lancaster Laboratories Sample No. 3955397

.Collected:12/05/2002 00:00

Account Number: 10666

Submitted: 12/06/2002 09:15

Reported: 12/19/2002 at 17:39

Discard: 03/20/2003 TB120402 Water Sample

Solutia

ISRT - Woburn, MA

TB402

SDG#: SIP78-17TB

Solutia, Inc.

575 Maryville Centre Drive

As Received

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
	Sufficient sample volume was no analysis. Therefore, a LCS/LCSD accuracy at a batch level.					

Laboratory Chronicle Dilution Analysis Trial# Date and Time **Factor** Analyst

CAT No. Method Analysis Name 08213 BTEX (8021) SW-846 8021B 1 12/09/2002 20:52 K. Robert James 1 12/09/2002 20:52 K. Robert James n.a. SW-846 5030B GC VOA Water Prep 01146



Lancaster Laboratories Sample No. 3955398

Collected:12/05/2002 00:00

by LC

Number: 10666

Inc.

Lauis MO 63141

ville Centre Drive

Sol

575

Submitted: 12/06/2002 09:15

Reported: 12/19/2002 at 17:39

Discard: 03/20/2003

TB120402 Methanol Sample

Solutia

CAT

No.

ISRT - Woburn, MA

124TB SDG#: SIP78-18TB

As Received

Method Detection

Limit

Unite

Dilution Factor

Page 1 of 1

08180 BTEX (Total Xylenes)

Analysis Name

08183 Benzene 08184

71-43-2 108-88-3

ug/kg ug/kg

Toluene The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

CAT

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

Laboratory Chronicle

Analysis Date and Time

Analyst

Dilution Factor

No. Analysis Name 08180 BTEX (Total Xylenes Method SW-846 8021B

12/10/2002 10:16

Deborah S Garrison

13



3955398



Page 1 of 1

Lancaster Laboratories Sample No. G5

Collected:12/05/2002 00:00

by LC

Account Number: 10666

Submitted: 12/06/2002 09:15

Reported: 01/21/2003 at 08:37

Discard: 04/22/2003

TB120402 Methanol Sample

Solutia

No.

ISRT - Woburn, MA

124TB

SDG#: SIP78-18TB

Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

CAT

As Received Result

Method Detection Limit

As Received

Units

Dilution Factor

BTEX (Total Xylenes) 08180

Analysis Name

08183 Benzene 08184 Toluene

71-43-2 108-88-3

CAS Number

N.D. N.D. 2.0 2.0 ug/kg ug/kg 25 25

The analysis for volatiles was performed on a sample which was preserved

in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

00405 Field Preserved Methanol

> The sample submitted for volatile organic analysis was preserved with methanol in the field.

> > Laboratory Chronicle

CAT Analysis Name No. BTEX (Total Xylenes) 08180

Method SW-846 8021B

Analysis

Date and Time 12/10/2002 04:32 Analyst

Deborah S Garrison

Dilution Factor 25



#### ANALYTICAL RESULTS

Prepared for:

Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

314-674-2025

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

#### SAMPLE GROUP

The sample group for this submittal is 832961. Samples arrived at the laboratory on Tuesday, December 03, 2002. The PO# for this group is 2000-08-07.

Client Description	Lancaster Labs Number
RX-2(2.5-5') Grab Soil Sample	3952446
RX-2(15') Grab Water Sample	3952447
RX-2(33') Grab Water Sample	3952448
TB_12-02-02 Water Sample	3952449
TB_12-02-02 Methanol Sample	3952450

#### **METHODOLOGY**

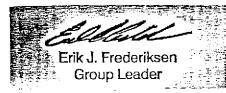
The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

1 COPY TO	Solutia, Inc.	Attn: Mr. Jorge Garcia
1 COPY TO	Roux, Inc.	Attn: Mr. Chris Milone
1 COPY TO	Data Package Group	



Questions? Contact your Client Services Representative Barbara A Weyandt at (717) 656-2300.

Respectfully Submitted,





Lancaster Laboratories Sample No. 3952446

Collected:12/02/2002 11:25

by LC

Account Number: 10666

St. Louis MO 63141

575 Maryville Centre Drive

Submitted: 12/03/2002 09:20

Reported: 12/11/2002 at 10:28

Discard: 03/12/2003

RX-2(2.5-5') Grab Soil Sample

Solutia

ISRT - Woburn, MA

RX2-2 SDG#: SIP77-01

Dry

Solutia, Inc.

Dilution

No.

CAT Analysis Name

CAS Number

Dry Result

Method Detection Limit

Unita

Factor

00111

n.a.

1

Moisture

"Moisture" represents the loss in weight of the sample after oven drying at

103 - 105 degrees Celsius. The moisture result reported above is on an

as-received basis.

08180 BTEX (Total Xylenes)

08183 Benzene

71-43-2 108-88-3

25. 3.3 1.5 1.5 ug/kg ug/kg

08184 Toluene

The analysis for volatiles was performed on a sample which was preserved

in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and

accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

methanol in the field.

Laboratory Chronicle

Dilution CAT Analysis Date and Time **Factor** Trial# Analyst No. Analysis Name Method 00111 EPA 160.3 modified 1 12/04/2002 18:20 Scott W Freisher 1 Moisture SW-846 8021B 1 12/10/2002 07:15 17 BTEX (Total Xylenes) Deborah S Garrison 08180

> Lancaster Laboratories, Inc. 2425 New Holland Pike PO Box 12425 Lancaster, PA 17605-2425 717-656-2300 Fax: 717-656-2681



Lancaster Laboratories Sample No. WW 3952447

Collected:12/02/2002 11:50

by LC

Account Number: 10666

575 Maryville Centre Drive

Submitted: 12/03/2002 09:20

Reported: 12/11/2002 at 10:28

Discard: 03/12/2003

RX-2(15') Grab Water Sample

Analysis Name

Solutia

CAT

No.

00777

ISRT - Woburn, MA

RX215 SDG#:

SDG#: SIP77-02

St. Louis MO 63141

Solutia, Inc.

 $\mathcal{A}_{i}$ 

As Received Method

Method Dilution
Detection Units Factor

Detection Units Factor

08213 BTEX (8021)

00776 Benzene

71-43-2

CAS Number

0.20

ug/l ug/l 1

Toluene 108-88-3 0.91 J 0.20 Sufficient sample volume was not available to perform a MSD for this

analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

Result

CAT Dilution Analysis Factor No. Analysis Name Method Trial# Date and Time Analyst SW-846 8021B 08213 BTEX (8021) 1 12/04/2002 21:40 Martha L Seidel 1 01146 GC VOA Water Prep SW-846 5030B 12/04/2002 21:40 Martha L Seidel n.a.



Lancaster Laboratories Sample No. WW 3952448

Collected:12/02/2002 15:15

by LC

Account Number: 10666

Submitted: 12/03/2002 09:20

Reported: 12/11/2002 at 10:28

Discard: 03/12/2003

RX-2(33') Grab Water Sample

Solutia

ISRT - Woburn, MA

RX233 SDG#: SIP77-03

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	3,000.	4.0	ug/l	20
00777	Toluene	108-88-3	850.	4.0	ug/l	20
Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.						

		Lanciacory	CILLO	111010		
CAT Analysis						Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/04/2002 23:49	Martha L Seidel	20
01146	GC VOA Water Prep	SW-846 5030B	1	12/04/2002 23:49	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. WW 3952449

Collected:12/02/2002 00:00

Account Number: 10666

Submitted: 12/03/2002 09:20

Reported: 12/11/2002 at 10:28

Discard: 03/12/2003

TB 12-02-02 Water Sample

Solutia

ISRT - Woburn, MA

SDG#: SIP77-04TB TB12W

Solutia, Inc.

575 Maryville Centre Drive

As Received

St. Louis MO 63141

CAT No.	Analysis Name	CAS Number	As Received Result	Method Detection Limit	Units	Dilution Factor	
08213	BTEX (8021)						
00776	Benzene	71-43-2	N.D.	0.20	ug/1	1	
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1	
	Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.						

Laboratory Chronicle Dilution Analysis Trial# Date and Time Analyst **Pactor** 

CAT No. Analysis Name Method SW-846 8021B BTEX (8021) 12/04/2002 20:57 Martha L Seidel 1 08213 GC VOA Water Prep SW-846 5030B 12/04/2002 20:57 Martha L Seidel n.a.

ug/kg

ug/kg

25 25



Page 1 of 1

Lancaster Laboratories Sample No. 3952450 G5

Collected:12/02/2002 00:00

Account Number: 10666

Submitted: 12/03/2002 09:20

Solutia, Inc.

Reported: 12/11/2002 at 10:28

575 Maryville Centre Drive

Discard: 03/12/2003 TB 12-02-02 Methanol Sample St. Louis MO 63141

2.0

Solutia

08183

08180

ISRT - Woburn, MA

TB12M SDG#: SIP77-05TB

Benzene

Toluene

As Received

CAT As Received Method Dilution No. Analysis Name CAS Number Result Detection Units Factor Limit 08180 BTEX (Total Xylenes)

N.D.

08184 108-88-3 N.D. 2.0 The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

71-43-2

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

methanol in the field.

BTEX (Total Xylenes)

Laboratory Chronicle

CAT Analysis Dilution **Pactor** Method Date and Time Analyst No. Analysis Name SW-846 8021B 12/10/2002 03:55 Deborah S Garrison 25



#### ANALYTICAL RESULTS

Prepared for:

Solutia, Inc. 575 Maryville Centre Drive St. Louis MO 63141

314-674-2025

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

#### **SAMPLE GROUP**

The sample group for this submittal is 833179. Samples arrived at the laboratory on Wednesday, December 04, 2002. The PO# for this group is 2000-08-07.

Client Description	<u>Lancaster Labs Number</u>
RX-4(15') Grab Water Sample	3953597
RX-4(12.5-15') Grab Soil Sample	3953598
RX-6(15') Grab Water Sample	3953599
RX-6(12.5-15') Grab Soil Sample	3953600
RX-4(29') Grab Water Sample	3953601
RX-6(29') Grab Water Sample	3953602
TB120302 Water Sample	3953603
TB120302 Methanol Sample	3953604

#### **METHODOLOGY**

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

1 COPY TO	Roux, Inc.	Attn: Mr. Chris Milone
1 COPY TO	Solutia, Inc.	Attn: Mr. Jorge Garcia
1 COPY TO	Data Package Group	





Questions? Contact your Client Services Representative Barbara A Weyandt at (717) 656-2300.

Respectfully Submitted,





Lancaster Laboratories Sample No. 3953597

Collected: 12/03/2002 11:10

by HAT

Account Number: 10666

575 Maryville Centre Drive

Submitted: 12/04/2002 09:05

Reported: 12/11/2002 at 10:30

Discard: 03/12/2003

RX-4(15') Grab Water Sample

Solutia

CAT

No.

ISRT - Woburn, MA

RX415 SDG#: SIP77-06

Analysis Name

St. Louis MO 63141

Solutia, Inc.

As Received

As Received Method

Detection Limit

Units

Dilution ' Factor

08213 BTEX (8021)

00776

71-43-2

ug/1

10

Benzene 00777 Toluene

108-88-3

CAS Number

Result

MSD for this

ug/1

Sufficient sample volume was not available to perform analysis. However, a MS was performed. In addition, a LCS/LCSD was

performed to demonstrate precision and accuracy at a batch level.

The reporting limits were raised because sample dilution was necessary to bring target compounds into the calibration range of the system.

_	CAT			Analysis			
	No.	Analysis Name	Method	.Trial#	Date and Time	Analyst	Factor
	08213	BTEX (8021)	SW-846 8021B	1	12/09/2002 10:19	Linda C Pape	10
	01146	GC VOA Water Prep	SW-846 5030B	1	12/09/2002 10:19	Linda C Pape	n.a.



3953598 Lancaster Laboratories Sample No.

Account Num

Solutia,

Centre Drive

Reported: 12/11/2002 at 10:30 Discard: 03/12/2003

RX-4(12.5-15') Grab Soil Sample

Collected:12/03/2002 13:00

Submitted: 12/04/2002 09:05

Solutia

ISRT - Woburn, MA

RX412 SDG#: SIP77-07

CAT

No. Analysis Name CAS Number

Dry Result

Dry Method Detection .

Units

Dilution **Factor** 

Page 1 of 1

00111 Moisture

n.a.

by HAT

Limit

"Moisture" represents the loss in weight of

sample after oven drying at 103 - 105 degrees Celsius. The moisture reg

reported above is on an

as-received basis.

08180 BTEX (Total Xylenes)

08183 Benzene 08184

71-43-2

108-88-3

ug/kg ug/kg

Toluene The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and

accuracy at a batch level.

00405 Field Preserved Methanol

The sample submitted for volat/le organic analysis was preserved with

methanol in the field.

Laboratory Chronicle

CAT Analysis Name No.

Moisture 00111 08180

BTEX (Total Xylenes)

Method EPA 160.3 modified SW-846 8021B

Analysis Trial# Date and Time 12/04/2002 18:20 1 12/10/2002 04:32

Analyst

Scott W Freisher Deborah S Garrison Factor 25

Dilution



3953



Lancaster Laboratories Sample No.

Collected:12/03/2002 13:00

by HAT

Account Number: 10666

Submitted: 12/04/2002 09:05

Reported: 01/21/2003 at 09:17

Discard: 04/22/2003

RX-4(12.5-15') Grab Soil Sample

Solutia

ISRT - Woburn, MA

SDG#: SIP77-07 RX412

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

Dry

Method Dilution Dry CAT Detection Units Pactor No. Analysis Name CAS Number Result Limit Moisture 0.50

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

08180 BTEX (Total Xylenes)

13 71-43-2 130. 1.2 ug/kg 08183 Benzene 108-88-3 13 3.8 1.2 ug/kg 08184 Toluene

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

00405 Field Preserved Methanol

> The sample submitted for volatile organic analysis was preserved with methanol in the field.

CAT			•	Dilution		
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	<b>Factor</b>
00111	Moisture	EPA 160.3 modified	1	12/04/2002 18:20	Scott W Freisher	1
08180	BTEX (Total Xylenes)	SW-846 8021B	1	12/10/2002 10:16	Deborah S Garrison	13



Page 1 of I

Lancaster Laboratories Sample No. WW 3953599

Collected:12/03/2002 11:40 by HAT Account Number: 10666

Submitted: 12/04/2002 09:05 Solutia, Inc.

Reported: 12/11/2002 at 10:30 575 Maryville Centre Drive

Discard: 03/12/2003 St. Louis MO 63141

performed to demonstrate precision and accuracy at a batch level.

RX-6(15') Grab Water Sample

Solutia ISRT - Woburn, MA

RX615 SDG#: SIP77-08

As Received Dilution CAT As Received Method CAS Number Result Detection Units **Pactor** No. Analysis Name Limit 08213 BTEX (8021) 00776 Benzene 71-43-2 21,000. 20. ug/l 100 00777 Toluene 108-88-3 67. 5.0 ug/l 25 Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was

		Habaraco	-,			
CAT			Analysis			
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/09/2002 06:34	Linda C Pape	25
08213	BTEX (8021)	SW-846 8021B	1	12/09/2002 09:35	Linda C Pape	100
01146	GC VOA Water Prep	SW-846 5030B	1	12/09/2002 06:34	Linda C Pape	n.a.



Lancaster Laboratories Sample No. 3953600

Collected:12/03/2002 13:15

Account Number: 10666

St. Louis MO 63141

575 Maryville Centre Drive

Solutia, Inc.

Submitted: 12/04/2002 09:05

Reported: 12/11/2002 at 10:30

Discard: 03/12/2003

RX-6(12.5-15') Grab Soil Sample

Solutia

ISRT - Woburn, MA

RX612 SDG#: SIP77-09

Method

Dilution

CAT No.

Analysis Name

CAS Number

Result

Detection Limit

Unita

00111

Factor

Moisture

n.a. "Moisture" represents the loss in weight of the sample after oven drying at

13.6

0.50

as-received basis. 08180 BTEX (Total Xylenes)

08183

Benzene

71-43-2

500.

1.3

ug/kg

. 14

08184

Toluene

108-88-3

103 - 105 degrees Celsius. The moisture result reported above is on an

1.8

1.3

ug/kg

14

The analysis for volatiles was performed on a sample which was preserved

in methanol. The reporting limits were adjusted appropriately.

Sufficient sample volume was not available to perform a MS/MSD for this analysis. Therefore, a LCS/LCSD was performed to demonstrate precision and

accuracy at a batch level.

Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with methanol in the field.

Laboratory Chronicle

CAT No. Analysis Name 00111 Moisture 08180 BTEX (Total Xylenes)

EPA 160.3 modified SW-846 8021B

Trial# Date and Time 12/04/2002 18:20 1 12/10/2002 07:51

Analysis

Analyst Scott W Freisher Deborah S Garrison Dilution Factor 1 14

Ð 1



Lancaster Laboratories Sample No. WW 3953601

Collected:12/03/2002 14:46

by HAT

performed to demonstrate precision and accuracy at a batch level.

Account Number: 10666

Submitted: 12/04/2002 09:05

Reported: 12/11/2002 at 10:30

Discard: 03/12/2003

RX-4(29') Grab Water Sample

Solutia

ISRT - Woburn, MA

RX429

SDG#: SIP77-10

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT		. ·	As Received	As Received Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	6,000.	10.	ug/l	50
00777	Toluene	108-88-3	1,900.	10.	ug/l	50
	Sufficient sample volume was not analysis. However, a MS was per		-			

CAT				Dilution		
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/09/2002 11:01	Linda C Pape	50
01146	GC VOA Water Prep	SW-846 5030B	1	12/09/2002 11:01	Linda C Pape	n.a.



Lancaster Laboratories Sample No. WW 3953602

Collected:12/03/2002 15:30 by HAT

Submitted: 12/04/2002 09:05

Reported: 12/11/2002 at 10:30

Discard: 03/12/2003

RX-6(29') Grab Water Sample

Solutia

ISRT - Woburn, MA

RX629 SDG#: SIP77-11

Account Number: 10666

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	<b>Pactor</b>
08213	BTEX (8021)					
00776	Benzene	71-43-2	14,000.	10.	ug/l	50
00777	Toluene	108-88-3	2,500.	10.	ug/l	50
	Sufficient sample volume was nanalysis. However, a MS was peperformed to demonstrate preci-	rformed. In add	dition, a LCS/LCS	SD was		

CAT			Analysis			Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/08/2002 12:11	K. Robert James	50
01146	GC VOA Water Prep	SW-846 5030B	1	12/08/2002 12:11	K. Robert James	n.a.



Lancaster Laboratories Sample No. WW 3953603

Collected: n.a.

Account Number: 10666

Submitted: 12/04/2002 09:05

Reported: 12/11/2002 at 10:31

Discard: 03/12/2003

TB120302 Water Sample

Solutia

ISRT - Woburn, MA

TBW12 SDG#: SIP77-12TB

Account Mamber, 1000

Solutia, Inc. 575 Maryville Centre Drive

St. Louis MO 63141

CAT			As Received	As Received Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
	Sufficient sample volume was no analysis. However, a MS was per performed to demonstrate precis	formed. In add	lition, a LCS/LCS	SD was		

		Laborato	ory Chro	nicle		
CAT			_	Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
08213	BTEX (8021)	SW-846 8021B	1	12/07/2002 02:48	Martha L Seidel	1
01146	CC VOA Water Pren	SW-846 5030B	1	12/07/2002 02:48	Martha L Seidel	n.a.



Lancaster Laboratories Sample No. G5 3953604

Collected: n.a.

Submitted: 12/04/2002 09:05 Reported: 12/11/2002 at 10:31

Discard: 03/12/2003

TB120302 Methanol Sample

Solutia

ISRT - Woburn, MA

TBM12 SDG#: SIP77-13TB

Solutia, Inc.

575 Maryville Centre Drive

St. Louis MO 63141

Account Number: 10666

Orelife.

				VR Kecelved		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
08180	BTEX (Total Xylenes)		_			
08183	Benzene	71-43-2	2.5 (j)	2.0	ug/kg	25
08184	Toluene	108-88-3	3.5 $\widecheck{\sigma}$	2.0	ug/kg	25
	The analysis for volatiles was print methanol. The reporting limit	erformed on a ts were adjus	sample which wa ted appropriatel	s preserved Y.		

00405 Field Preserved Methanol

The sample submitted for volatile organic analysis was preserved with

methanol in the field.

Laboratory Chronicle

CAT | Analysis Name | Method | Trial# | Date and Time | Analyst | Factor |
08180 | BTEX (Total Xylenes) | SW-846 8021B | 1 | 12/10/2002 05:08 | Deborah S Garrison | 25

#### ATTACHMENT B

ISRT Source Area Investigation Conducted December 2002

**Chain-of-Custody Forms** 

# Analysis Request / Environmental Services Chain or Custody



(4		Ple	ase print. Instru	uction	s on	reve	rse si	de co	orres	pond v	vith cir	rcled n	umbe	rs.										
Υ'	Client: Roux Asa - TSRT 3/1	#C. Acct. #:				11 A STATE OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF TH	/atrix		$\Box$	-	(5	$^{\circ}$	~		Analy	/ses	Req	uest	teđ				Use On	ly
	Project Name#: <u>TSRT_Solutio</u> Project Manager: <u>LCVA_IMTIELEDOLE</u>	PWSID :	#:		_	1000年			lers			7	¥ /		/,	/,	/,	/,			<u>_</u>	FSC: SCR #:	шээ	(8) (9) (1)
	Sampler: L. Colpura   11.7ran  Name of state where samples were collected:	<u> </u>	:	(3)	site				of Containers	/		<b>§</b>	/ /	/	/,	/,	/,	/	/					ure of sample tot (if request
(2	Sample Identification	Date Collected	Time	Grab (	Compo	Soil		Other	Total # (				<u>/</u>	<u>/</u>	$\angle$	_	_	$\angle$	/	Remar	ks			Temperature upon receipt (
ı	1X-2 2.5-5'	12/2/63	1125	X		X			1	X		··							ļ.,	400	+1 x	reser	nd	
ļ	_RX-2 15'	12/2/0	1150	$\lambda$			Х		3	X								ļ	1	12 DYC	Ser	100		
ı	RX-2 33'	12/5/02	1515	lх			X		U.S.	X														
	TB 12-02-02	12/2/0-	1				Х		43	X							_						,	
ı	TB 12-10-02	12/2/0				$\overline{}$		<u> </u>		,			$\neg \uparrow$			-		<del>                                     </del>		4.0	<u> </u>		~	,
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<b>(8</b> )	Data Package Options (please circle if required)	SE	G Complete	?										-										
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	Type I (Tier I) GLP State-specific Q	C required?	Yes No	ヿ		•		•										,						
	Type II (Tier II) Other (If yes, indicate QC s	ample and submi	it triplicate volum	≘.)	Reli	יים	shed	þν·					Dat	e	Time	Re	ceive	ed hv	ı.			•	Date	Time
	Type III (NJ Red. Del.) Internal Chain of	Custody req	uired? Yes I	ا ۱ <i>۵</i>	. 1011			<i></i>					الما	٦		'``	JU14 C	.u by	,				Date	, ,,,,,
	Type IV (CLP)			l																_				

## Analysis Request / Environmental Services Chain or Custody

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Acct. #	_ Group#	_ Sample #		COC#	0010168

1	Ple	ase print. Instru	uction	s on re	verse	side d	corre	spond	with ci	rcled r	numbe	rs.							
Client: Kowy	Acct. #:				Mati	ix (	4)		(5	$^{\circ}$ Z			Analy	/ses	Req	uest	ed For	ab Use O	ıly
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Project Manager: LOTTY MCTIETO	<u>an</u> p.o.#: _	<u> </u>		_ 🕌	ð s		ers			K,	7 <b>9</b> 13		/ /	/ /	Ι,	/ .	/ / /	-	<b>76</b>
Sampler: HAT/LITE	Quote #	<u> </u>		- 4. 5. 5.		3	tair		13	Χ,	37	/							ples este
Name of state where samples were collected: _	04 Y	_	3	- E	Potatio		of Con	/		/ 		/	/ /	/ ,	Ι,	/	//		e of sam of (if requ
2 Sample Identification	Date Collected	Time Collected	Grab (	Compos		Other	Total # of Containers	800	~\ }``	°/		/					Remarks		Temperature oupon receipt (
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RX-4 (12,5-15)	12/3/02		χ		1		Ĭ	Α,	Χ								Me OH NY	5.	
RX-6 15	12/202	1140	X	1			え	X									1		
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Phone #: Fax #:			1	Ru	ds.	a	Ui	1.1			10/3	12	1555	†					
E-mail address:				Relinq	- ,				<u></u>		Date	e	Time	Re	ceive	d by		Date	Time
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QC Summary Type VI (Raw Data)	Y	es No	Ī	Relinq	uishe	d by:			_		Date	е	Time	Re	ceive	ed by	C	Date	Time
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Type II (Tier II) Other (If yes, indicate QC s				Relinq	uishe	d by:					Date	e	Time	Re	ceive	ed by	•	Date	Time
Type III (NJ Red. Del.) Internal Chain o	of Custody req	uired? Yes N	No			,						ŀ							
Type IV (CLP)			1								<u> </u>			1.					1

## Analysis Request/ Environmental Services Chain of Custody

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Acct. #\_\_\_\_\_ Sample #\_\_\_\_\_

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Client: Kint K	Acct. #:_			M		4)			(5)	/ 4	. j. j., A	naly	ses Re	quest		r lab use	
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Project Manager:							SJers				/ /						ig gr
Sampler: Harry / Carry	Quote #:						Containers		/ /	7 /							f samples f requeste
Name of state where samples were collected:	1, 15		3 site				# of C				/ /	/	/ /	/ /			erature of receipt (if
Sample Identification	Date Collected	Time Collected	Grab	3		Other	Total :			:/ /					Remarks		Temper
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Date results are needed:  Rush results requested by (please circle): Phone Fax Phone #: Fax #:			Relinqui Relinqui							Date	Time	ļ	ived by:			Date	Time
Data Package Options (please circle if requested) QC Summary Type VI (Raw Data)		Complete?	reinqui	si ieu t	ıy.					Date	Time	nece	ived by:			Date	Time
Type I (Tier I) GLP Site-specific QC requ	ired? Yes	No.	Relinqui	shed b	y;					Date	Time	Rece	ived by:			Date	Time
Type II (Tier II) Other (If yes, indicate QC sample Type III (NJ Red. Del.)  Type IV (CLP) Internal Chain of Cu		••	Relinqui	shed t	oy:	-				Date	Time	Rece	ived by:			Date	Time

### Analysis Request / Environmental Services Chain or Custody



	For Lancaster Labo	ratories use only		
Acct. #	Group#	Sample #	COC #	0010167

1)-	Ple	ase print. Instru	ctions	on rev	erse si	ide c	orres	pond	with cir-	cled n	umbers	i.									
Client: ROVX ASSX 10413	Acct.#:	_			Matrix	<u> </u>	$\overline{\mathbf{C}}$		(5)	$\mathcal{L}$		An	alyse	s R	equ	este	d			Lab Use Or	ily
Project Name/#:Solvtia 06626M	35 pwsid	#:			A Capte					Γ,	/ /	/	/ /	/	Ι,	/	7	/	7 FSC SCF	R#: <u>11 1 -</u>	_~
Project Manager: Larny MT18111011	P.O.#: _			-	D/Z		E 3		$\Lambda$								/ /	′ /			्र
Sampler: L. Colburn H Trent	Quote #	•			多品		ţaj			$\mathbf{y}_{\cdot}$	<b>V</b>	/ ,	/ ,	/							rples este
Name of state where samples were collected: _			3		æ ≥ □□		of Containers	/:			7 /					/	/ /	/			re of san pt (if requ
2	Date	l l		퉡  _	N. Abr	5	Total#		V.	Y	/ /	/ ,	/ ,	Ι,							veratu
Sample Identification	Collected	Collected	Grab		B	Other	Tot	1	\$ 9\Z	<i>!</i> /	/ /					/	/ Re	emark	s		Tempe upan r
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RX-5 15'	12/5/02		χ		X		3	X	_					_			$\frac{1}{i l}$	<del></del>	· All	17	
RX-5 7.5-10'		11-15	Ý	Ιx	<u> </u>		./		V		-			$\perp$	$\dashv$			1 { 2 }		<u></u>	
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TB 120402	13/5/03				X	-	0	X			$\rightarrow$	$\perp$	$\perp$				1 /	** ) (	1 4/1/	· /* · / ·	
TB 120402	13/5/11			\\		<u> </u>		У				_					<i>"</i> .,	(1)	-: 		
RX-5 29'	1015/ca	1430	$ \mathbf{x} $		$  \times  $		3	$\chi$									1.	14/4	V + 10.	<i>i</i> '	
RX - 1 30	13/5/03	1300	χ		X		3	$\mathbf{X}$			$\Box$							<i>y</i> * .	1. 17.	15/	
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(Rush TAT is subject to Lancaster Laboratories appre	oval and surcha	irge.)		P. T	b	ú c	٤				Hills					•					
Date results are needed:			R	Relipiqu							Date		ne F	ecei	ived	hv.		_		Date	Time
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E-mail address:				Relinqu			. 1262	<del> </del>			Date	+	ne F	Recei	ived	by:				Date	Time
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Type I (Tier I) GLP State-specific Q	C required?	res No											}								
Type II (Tier II) Other (If yes, indicate QC s	•	•	. 16	Relingu	ished	by:					Date	Tir	ne F	lece	ived	l by:				Date	Time
Type III (NJ Red. Del.) Internal Chain of	f Custody req	uired? Yes N	О	,		•										•					1
Type IV (CLP)																					

## Analysis Request / Environmental Services Chain or Custody

COC #

0010169



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. Where quality is a science.	Acct. #	Gro	oup#			Sarr	ple #	<u> </u>			_ (		C #	001016	9
2	Ple	ase print. Instr	uctions	on rev	erse si	de corre	espo	nd with circled	l numbers.						
client: ROUX - SOLUTIA	Acct. #:			, P (	Matrix	4)		(5)		Analy	ses Re	quest	ed	For Lab Use	Only
Project Name/#: . 5 11 110 0006					1			-	//	′ /	//	/ /		FSC: SCR #:	72624
Project Manager: 10rn 1 McTin					8 8	. 9	,		/ /	/ /	/ /		/: / <i>F</i>		<b>(6)</b>
Sampler: L Collaurn B. P.	27/12 1.0.#	.,	<del></del>		<b>2</b> .00	Containers		125	( s./ .	/ /		/ /			8 g
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RX-8 7.5-10'	P/6/02	<del></del>	X	<u> </u>	-	1	$\frac{1}{3}$	\				$\rightarrow$	Mio	,	
RX-8.31'	12/1/12		X		X			<u> </u>					1/Aprils	crv11	
RX-11 15'	19/6/02	1015	X		$\perp$	2	$\mathbf{x}$						Unois	SINVE	
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Date results are needed:			: <u>-</u> 2						1/34/0						
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E-mail address:				elingu	i <b>s</b> Ked	by:			Date	Time	Recei	ved by:		Date	e Time
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## Analysis Request / Environmental Services Chain of Custody

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41.	Where quality is a science.

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Where quality is a science.	Acct. #	Gro	up#_			Sa	amp	le# _			<del>-</del>			C	O	<b>C</b> #	0	010	170	)
1	Pie	ase print. Instru	uction	ns on I	reverse s	ide co	res	spond :	with ci	rcled r	numbers	i.								
Client: Solutia / Roux	Acct.#:				Matri	<u>(</u> 4	7		(5	$\sum$	n.	Ana	lyse	s Rec	uest	ed		For Lat	Use Or	ıly
Project Name/#: Landay					1 2 8	lΊ	ا				Ŧ 1					//		SCR #:	(1)	1514
Project Manager: 36 In France of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the					8 8		و				/ w/					//	$\vdash$			(6)
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Sampler: 11/77/LIC				-	o Co		ă		$I_{\mathbb{R}^2}$	/	7	/ /				//	'			ampl
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2)	Data .			8	2	1	#	/.	XP.	1		/ /	/ /	/ /	' /					Temperature of samples (upon receipt (if requested)
Sample Identification	Date Collected	Time Collected	Grab	ĕ	Soil	¥	Total #	(B)	/·`	7	/ /					Rema	arks			eupe bou c
Kx-12 (15')	12/9/02					_	<del>5</del>	$\stackrel{\sim}{\star}$				<del>-</del>	1	1	<del>/</del> —	<del>1</del>		<del></del>		
	<del></del>	<b>-</b>	X	-	X	+	_		-			-	╁	+				·		
RX-13 (15')	12/01/02	1		$\vdash$	X		3	X					<del> </del>	-	<del> </del>	13 13	pr 05	•		
KX-12 (75-10')	129/02		X	_	_X		2	X	X			$\bot$	-	<u> </u>		M/0	) H	1105	<u> </u>	
KX-13 (5-7.51)	12/9/02	1050	X	_	χ		223	Х	X				<u> </u>		<u> </u>	Mic	611	210	<u> </u>	
12x-12 (31')	12/01/02	1430	X		X		3	_}_					$\perp$		<u> </u>	ICA:	OYC	05		
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Turnaround Time Requested (TAT) (please	e circle): Norm	al Rush	۱	Palin	quished	bu:	لـــــــ	<u> </u>		<u></u>	Date	Tim		eceive	ad by	<u>!</u> _			Doto	Time (9
(Rush TAT is subject to Lancaster Laboratories ap				•	Lut	-					1	1010		CCCIVE	su by.	•			Date	Time C
Date results are needed:		<del></del>	ľ		quished	-	e:	1			Date	1	- 1	eceive	ad by	<del> </del>			Date	Time
Rush results requested by (please circle):		E-mail			2+/10	•	1	- 2000 - 1000	₹ 1×	+	12/9/			SCCIVE	our,				Date	, ,,,,,,
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Data Package Options (please circle if require	od) SE	OG Complete		· (OIII)	quianou	۵,						''''	٠٠٠٠	500141	Ju 29.	•			50.0	
QC Summary Type VI (Raw Data)	1	es No	- 1	Relin	quished	bv:					Date	Tim	e R	eceive	ed by		<del></del>		Date	Time
Type I (Tier I) GLP State-specific			$\dashv$		12.21.22	-,.						'''		_ 4.4.	- <b> 7</b> '					
l l	C sample and submi			Relin	quished	bv:					Date	Tim	e R	eceive	ed by:	·			Date	Time
	of Custody req	uired? Yes N	40		42.2	<b>,</b> .									· · ·	-				
Type IV (CLP)												<u> </u>								l

## Environmental Services Chain or Custody



For Lancaster Laboratories use only

Where quality is a science.	Acct. #	Gro	опр#_				Samp	ile#_						_	C	O	<b>C</b> # 0	01017	1
	Ple	ase print. Instr	uction	s on re	everse	side	corre	spond	with ci	ircled i	number	S.							
Client: Solution	Acct. #:				Mai	rix (	4)		(5	$^{\prime}$		Α	naly	ses	Requ	ueste	ed /	For Lab Use C	
Project Name#: Sol: tin - netrice	1 PA-PWSID	#:			5		Υ				Ĭ,						I/I	FSC: SCR #:	1524
Project Manager: A District 11					186 5	<b>8</b>	e		/	13	1 ./	/	/ /	/ /	Ι,		/ / <del>/-</del>		(6)
, , , , , , , , , , , , , , , , , , ,				1 7-	8	(E)	ine	•		3/	/						′ / /		sted)
Sampler: 11#7/LHC				-in.	- 5	[]	onts		/ /	Ϊ.	Ĭ /	/	/				//		gamb
Name of state where samples were collected:	11/1		(3)	site .			of Containers		$I_{\sim 2}$		7 /			/	/	/ ,	/ /		9 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
2 Sample Identification	Date Collected	Time Collected	Grab (	Composite	<b>8</b> 1	Other	1 **	A.S.	/>	7	//	/ /	/,	/,			Remarks	*	Temperatur upon receip
KX-14 (15')	12/10/62		χ			х	3	Х									huyires.		
RX-14 10-200	12/10/02	· <del></del>	X		X		2	Х	X								Mod		
KX-17 (15')	12/10/02		X		$\neg$	χŤ	7	X										71.63	
KX-17 (6 7,51)	1-10102					^+	2	×	X			$\dashv$							
$\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$			Х		<b>Х</b> —,	-	_ 2  3	X	<u> </u>			-+		$\dashv$			1	pres_	
	12/10/02		X			<u> </u>	3	X	<del> </del>		+	-+	$\dashv$				111-11103		
RY 17 (33')	12/10/02		X	1		$\leftarrow$		<b>}</b>	<del> </del> -	<u> </u>	1			-					
T812/002	12/0/02		ļ			$\leftarrow$	2	X		ļ	$\vdash$	_	<b></b> Ì				111 115		
1014002	12/10/22		<u> </u>	$\sqcup$	`	X L	11	X									HOTTI	2163	
RX-14 (15") DUP	12 10104	1040																<u> </u>	
			<u> </u>																
Turnaround Time Requested (TAT) (please	•			Relind		•					Date	Т	ïme	Rec			i		Time (
(Rush TAT is subject to Lancaster Laboratories арр Date results are пееded:		arge.)	ľ	1	-	To ch	<u>.                                    </u>				Trolo	2 (1)	100	H		<u> </u>		12/18/1	2 0700
Rush results requested by (please circle):		E-mail		Religi				٠,	,	i	Date	T	ïme		eive	d by:		Date	Time
Phone #:Fax #:			ļ	1/11	1-(1)	<i>I</i> (	<u>. †</u>	<u> </u>	, 7	i .	1-/0/0	2 1	000						
E-mail address:				Relino	quish	ed by	<b>"</b> :				Date	T	ïme	Rec	eive	d by:		Date	Time
Data Package Options (please circle if required	ı) SE	G Complete	?									$\bot$							
QC Summary Type VI (Raw Data)	L.	es No		Relind	quish	ed by	r:				Date	Т	ime	Rec	eive	d by:		Date	Time
Type I (Tier I) GLP State-specific (Type II (Tier II) Other (If yes, indicate QC			,	_			_				ļ 	_ _							
Type III (NJ Red. Del.) Internal Chain				Reline	quish	ed by	<b>'</b> :				Date	T	ime	Rec	eive	d by:		Date	Time
Type IV (CLP)																			

#### malysis request / Environmental Services Chain of Custod



For Lancaster Laboratories use only

Where quality is a science.	Acct. #	Gro	up#_		_		Samp	le#_						_ (		C	<b>;</b> #	0010	0172	2
1		ase print. Instru			verse :	side d	corres	spond	with c	ircled (	numbers	<b>S</b> .								
Client: Solution / Value	Acct. #:				Matr	<b>x</b> (	4)		(5	$^{\prime}$		An	aly	es Re	que	sted		For La	ıb Use Or	nly
Project Name/#: Soloto and rath					2 2	1	$   \mid    \mid$			7	3	Ι,	/	/ /	/ ,	Ι,	///	SCR#	: 111	1524
Project Manager: 111 Tre private				25			وا				7 4		/	′ /			' / <i>F</i>			(6)
				- 1	<b>9</b> 4	}	je l			X	4				/					ie is
Sampler: HAT/1.HC				. ,	Potable		ital		/.	1	7 /	/ /		/ /	/ /	/ /	/ /			amb
Name of state where samples were collected:	11/14		3	Egg.	i di	JI .	of Containers	/	, sy		/ /									e of s
2)	Date	Time	)	od .		<b>.</b>	# 2	\ \frac{1}{2}	. X	7		/		/ /	Ι,	Ι.	/			eceip
Sample Identification	Collected	Collected	Gra	Composite		Other	Total # (	000	/ "	Ÿ	/ /		, _/	/ /			/ Remarks			Temp
KX-15 (15')	12/11/02		Х		X		2	X									10 21es	,	•	
RX-15 (7.5-10')		1250	Х		X		2	X	*											
RX-16 (15')	12/11/02	+300/055	Х		X		2	X					_	"			Meo.H.	· S		
F.X-16 (7.5-10')	12/11/02		X		X		2	X	X								Meol	1 08	es	
_ RX-15 (29)		1415	Х				2	Х	ļ <b>'</b> —							十	M. pre	<u> </u>		
RX-16 (29')		1405	Х	-	X		2	7.		<u> </u>		-	Ť	_	7		Lupr			
T6/2/102	12/11/02	1	•		X	1	1	*					1		$\top$	ľ	McOH			
T73121102	12/11/02		-	1	X		2			<del>                                     </del>			1		+	7	1115 AV	<del></del>	<del></del>	
KX-16 (7.5-10) DUP	12/11/02		X		x		2	. X.	X	<del> </del>	<del>                                     </del>				+		Unpre Me OH			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12/1/102							<del>-</del>			<del>  -</del>				-	- 1	<u> </u>	<u> </u>	· · · · ·	
Turnaround Time Requested (TAT) (please	circle); Norm	al Rush	T	Relina	luished	by:		<u> </u>	<u> </u>		Date	Tir	ne	Recei	ved t	DV:		<del></del>	Date	Time (9
(Rush TAT is subject to Lancaster Laboratories ap		arge.)			de	-					1/Sup		(2)	1.7	<u> </u>		<u>+</u>		12/1/	2 070
Date results are needed:  Rush results requested by (please circle):		E-mail	- 1	•	uishe						Date	Tir		Recei					Date	Time
Phone #:Fax #:			1										Ì							
E-mail address:				Reline	uishe	d by:			·		Date	Tir	me	Recei	ved t	by:			Date	Time
Data Package Options (please circle if require	d) SI	G Complete?	, <u> </u>																	<u> </u>
QC Summary Type VI (Raw Data)	t	es No	[	Relin	ąuish <b>e</b> c	d by:					Date	Tir	me	Recei	ved t	oy:			Date	Time
Type I (Tier I) GLP State-specific	•		, [		_	_														
Type II (Tier II) Other (If yes, indicate QC Type III (NJ Red. Del.) Internal Chain	of Custody req	,		Relin	quishe	d by:					Date	Tir	me	Recei	ved b	oy:			Date	Time
Type IV (CLP)			_					_							_					

#### Amalysis Request / Environmental Services Cham & Custody

COC#

0010722



Acct. #

For Lancaster Laboratories use only

Sample #

Group#

	• , , , , , , , , , , , , , , , , , , ,																• // 0010	· · · · ·	_
1			ase print. Instr			reverse	side	corre	spond	with cir	cled n	umbers							
Ì	Client: State Karex	Acct. #:			_	Mat	rix	4)		(5)			An	alyse	s Rec	uest	For La	b Use On	ıly
1	Project Name#: Saluba source H										/ /	¥ )	/ /	/ /	′ /		SCR#	1178	<u> </u>
ı	Project Manager: Lilly Tierran					8		ρ			3	/עי					/ /		(6)
1							2	Containers		/\	13	~] 			/ /	/ /	' / /		
ı	Sampler: HT/LC				— ļ		<b>.</b>	onta		/ :		¥ /	/ /	/			//		requested)
١	Name of state where samples were collected: _	mh		3	iğ.		9	<u>پر</u>	/	/	7	′ /				/ /	/ /		0.3=
$\left( \overset{\mathbf{r}}{2}\right)$		Date	Time	4	ğ	43	i i	111		75	$\sqrt{}$		/ /	/ /	/ /				Temperature
	Sample Identification	Collected		Grab	Ö	No.	Other	Tot		/ /	Ϊ,	/ /					Remarks		Temp
[	RX-7 (15')	12/12/02	0950	Х				5	>								1117165		
1	NY 7 (2.5.5')	10/10/02		χ		A.		12	- ····	y.		i					INIZATI PER		
ļ	KY-16 ()5')	12/12/02		X	++	<del>-</del>  -;	X	13	<u>\</u>	*				+	1	1			
	KX-10 (0-2,5')	1	1215	X	+	X		1	À	Х			+	-	+		Medt pres		
		12/11/02			+	-	(	3		<u> </u>				-	+	<u> </u>	1711011 1110		
	<u> (31')</u>	12 10/62		X	+		— <del> </del> —		×			_		+	-	-	114 1183		
	RX-10 (25')	12/11/2	1245	X		_ _}	<u>.</u>	3	7				_		<u></u>	ļ	N17103		
	TOIZO TIDIZIOZ							2	¥						_		101-11185		<u></u>
ľ	TD121702							}	X					1			Wolf pres	ı	
١	KX-7 (31) DUP	12/12/02	1405	X		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	×	3	\ \ \								Lupres.		
		1		ľ															<del></del>
니 7	Turnaround Time Requested (TAT) (please o	ircle): Norma	al Rush		Relin	quishe	d by	 ':	$L^{2}$	17	$\mathcal{I}$	Date	Tin	ne R	eceive	ed by:	. 1	Date	Time 9
٦	(Rush TAT is subject to Lancaster Laboratories appr	oval and surcha	arge.)			•		$\leq \geq$		15	£ "	90			<b>)</b> {	~ ~ ~	Lunt		0700
	Date results are needed:  Rush results requested by (please circle): Pt		E-mail		Relin	iquishe	d by					Date	Tin	ne R	_ eceive	ed by:		Date	Time
	Phone #:Fax #:				H	/ 4	/ -(	J. 1	{ S.	+	I	2/12/0	15	70		-			
	E-mail address:		·			quishe					- 17	Date			eceive	ed by:	<del></del>	Date	Time
8	Data Package Options (please circle if required)	St	G Complete	?		•													
	QC Summary Type VI (Raw Data)		es No		Relir	quishe	d by	<u>'</u> :				Date	Tin	ne R	eceive	ed by:	<del></del>	Date	Time
	Type I (Tier I) GLP State-specific Q	C required?	res No			•	·									•			
	Type II (Tier II) Other (If yes, indicate QC s		•	-	Relir	quish	ed by	<i>r</i> ;				Date	Tin	ne R	eceive	ed by:		Date	Time
	Type III (NJ Red. Del.) Internal Chain o	f Custody req	uired? Yes	No		•	•									•			
	Type IV (CLP)													ļ					1

#### Analysis Request / Environmental services Chair of Custoay

412	Lancaster	Laboratories	
46.	Where quality is a	science.	_

	For Lancaster Labo			
Acct. #	_ Group#	Sample #	COC#	0010709

(1	`	Ple	ase print. Instru	iction	ns on	rev	erse si	ide c	orres	spond	with ci	rcled r	numbe	ers.								
Ϋ	Client: Jolutia - Krux	Acct. #:					Vlatrix	<u> </u>	4)		(5	$\sum$			Analy	ses	Req	ueste	∍d	For La	b Use Or	ıly
	Project Name#: Solution Source 1	1				8 77 77 2	Check if Apolicable	`	$\lceil \rceil$				Ž.	$\int_{-\infty}^{\infty}$					///	SCR#		
	Project Manager: L. Matternan						Appli		£			(in	7 Ý	9	/ ,	/	/ .	/	/ / <i> </i> -	-		<b>7</b> 6
							Potable NPDES		Containers			X	4									
1	•		:				RAG	1	ont		Ι,	<b>y</b> ]	1									samples
I	Name of state where samples were collected: _	TYIH	<del></del> [	(3)	1	_^^. 			of C			' Ý		/	/ /	/	/ /	/ /	/ /			e s
$\frac{1}{2}$		Date	Time	ا ما	8		j j	55	24.		J. (C.	\ <b>y</b>										eratu
]	Sample Identification	Collected	Collected	C S	8	3	Water	Other	Total		/ ,	<i>/</i> `.	/ ,	/	Ι.				Remarks			Temp
Ţ	RX-18 (30')	14/13/02	1110	X			χ		2,	χ									bipre	<		
1	KX-19 (30')	12/13/02	1	X	+	<del> </del>	V	-	2	)_/.  X												
١	KX-18 (13')	12/2/02		4	1	$\vdash$	<b>₹</b>	-		*									her pre-			
Ì				*	$\vdash$	-		_	2	7							_		Livyre			
-	<u> </u>	12/13/12	1950	7		-	-X		1	7									Linges	· · · · · · · · · · · · · · · · · · ·	<del></del>	
-	16 2 302	12/15/02				<u> </u>	X	<u> </u>	7				<b> </b>									
-	1/5/12/1302	13/02			_	X		<u>,                                    </u>	1	X								_				
-	<u>IB121302</u>	12/13/07			<u> </u>		X		2	X.									Ki. pres	۶٠		
١	FB121302 Water	12)12/03							1	X		<u>'</u>	) )						hi res	> •		
1	- KX-19 (2,3-5')	14/13/02		X	ſ	X			2	X	X								MEDIL			
-	KX-18 (10-15')		1550	X		Ľ	,	$\top$	12	V	$\nabla$								HOOK	7-	401	$\overline{Q}$
<b>₹</b>	Turnaround Time Requested (TAT) (please of			۱	Reli	nau	ished	bv:	1				Date	e ·	Time	Red	ceive	d by:			7	Time (
$\dashv$	(Rush TAT is subject to Lancaster Laboratories appro	oval and surcha	arge.)		<b>1</b> 1		1.	-			<b>Ļ</b> —		12	- 1	13.00	l						
	Date results are needed:		<del></del>	1	-		ished						Date				ceive	d by:			Date	Time
	Rush results requested by (please circle): Phone #: Fax #:						Earl		e ,	ga			14:	- 1				,,				
1	E-mail address:	· <del></del>		1	,		ished			·			Dat	<del>-</del> -		Re	ceive	d bv:			Date	Time
<b>8</b>	Data Package Options (please circle if required)	SE	G Complete?					_,.										<b>-</b> ~ , .				
	QC Summary Type VI (Raw Data)	- 1	es No		Reli	ingu	ished	bv:					Dat	e l	Time	Red	ceive	d by:	· <del>-</del>		Date	Time
]	Type I (Tier I) GLP State-specific Q	C required?	Yes No		ļ - <del>1</del>	7.		,														
	Type II (Tier II) Other (If yes, indicate QC s		•		Reli	nau	ished	bv:				<del></del>	Dat	e	Time	Rei	ceive	d by:		<del></del>	Date	Time
Į	Type III (NJ Red. Del.) Internal Chain of	f Custody req	uired? Yes N	10				-,.						Ĭ				1.				
[	Type IV (CLP)	<del></del>											<u> </u>									

## Analysis Request , Environmental Services Chain of Custody



	For Lancas	ster Laboratories use only		
Acct. #	Group#	Sample #	COC #	0010173

	Ple	ase print. Instru	uctions	s on r	everșe	side	corre	spond	with cir	rcled r	umbe	rs.									
Client: School a - KOOX	Acct. #:				Mat	rix (	4		(5)	$\Gamma$			Analy	/ses	Req	ues	ted			ab Use Or	ly
Project Name/#:	PWSID :P.O.#:Quote #	#:		—	Tradable Check#	MPDES Augustable	of Containers	,				/ /	<i>7</i>			<u> </u>	, / /		FSC: SCR:	* <u> </u> 173	of samples (9)
2 Sample Identification	Date Collected	Time Collected	Grab (	Compos		Other	1 44		/: /		/,		/,		/		/	/ Remarks			Temperature ( upon receipt (
BX-3 5-7.5'	12 (19/2)			7	X		12	X	X					32			1	MOOF	<u> </u>		
															,						<u> </u>
				-		-	<u> </u> 									<u>.</u>			· · · · · ·	<del> </del>	
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		·				_								_		-	-	<del></del>		<u></u>	
																	-				i
Turnaround Time Requested (TAT) (please c	•		<b>L</b>	Relin	quishe	d by	i.	L			Date	e آ	I Time , ⊊o	Red	ceive	d by	<u> </u>			Date	Time (9
Date results are needed:  Rush results requested by (please circle): Phenone #: Fax #:			F	Relig	quishe	ed by:	:	1	•		Date	a   '	Time   <sub>  </sub> /_>		ceive	ed by	r:			Date	Time
E-mail address:			117	,	quishe						Date	e T	Time	Re	ceive	ed by	r:			Date	Time
Data Package Options (please circle if required)	SE	G Complete	7																		
QC Summary Type VI (Raw Data)  Type I (Tier I) GLP State-specific Qu		es No /es No		Relin	quish	ed by	:				Date	e	Time	Re	ceive	ed by	<b>/</b> :			Date	Time
Type II (Tier II) Other (If yes, indicate QC s Type III (NJ Red. Del.) Internal Chain of Type IV (CLP)	•		11	Relin	quish	ed by	:				Date	e	Time	Re	ceive	ed by	r:			Date	Time

# and sis Request / Environmental Services Chain of Custody



For Lancaster Laboratories use only

Acct. #\_\_\_\_\_\_ Group#\_\_\_\_\_ Sample #\_\_\_\_\_ COC # 0010719

Client: Navy A. Ac. 4 4 5	Acct #:				Matrix	X CA	$\overline{1}$		(5) <u>/</u>	7		Anal	yses	Req	uest	ed	For Lab Use O	
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Name of state where samples were collected: _	1/3		3	ite	<b>全</b> 全		Con		N.			/,	Ι,	Ι,	Ι,			e of samples t (if requeste
2 Sample Identification	Date Collected	Time Collected	Grab (	Сощроя		Other	Total # c					$\angle$				Remarks		Temperature ( upon receipt (
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Type I (Tier I) GLP State-specific Q Type II (Tier II) Other (If yes, indicate QC: Type III (NJ Red. Del.) Internal Chain of Type IV (CLP)	sample and subm	it tripficate volum		Relinq	uished	by:				D	ate	Time	Re	ceive	d by:	:	Date	Time